AMERICAN BEE JOURNAL

Bless Thou The Bees

December 1940

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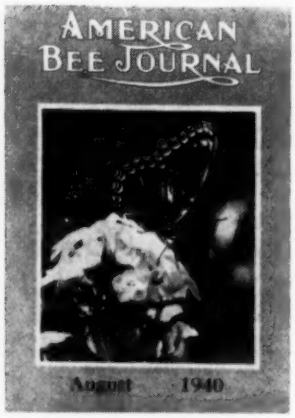

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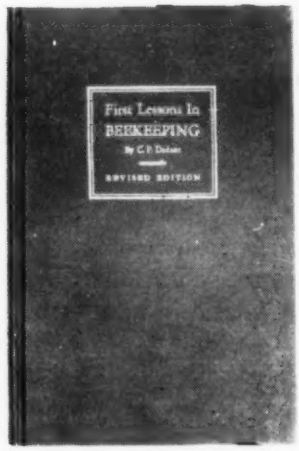

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AMERICAN BEE JOURNAL

EDITORS: G. H. CALE, FRANK C. PELLETT, M. G. DADANT, J. C. DADANT

DECEMBER, 1940 Vol. LXXX No. 12

Cover Picture—

Our new cover series begins with this number. Dr. Bodog F. Beck supplies material for both pictures and accounts of the influence of the honeybee in the life of mankind. We feel sure that this unusual entertainment will delight many readers.

 Published monthly at Hamilton, Illinois. Entered as second class matter at the Postoffice, at Hamilton, Illinois. In United States, Canada, and Mexico, $1.00 a year; two years $1.50; three years $2.00; Foreign $1.25 a year; two years $2.00; three years $2.75. Subscription stopped at expiration printed on wrapper.

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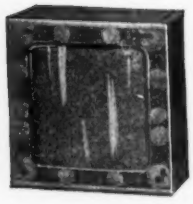

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Send your order to our office nearest to you

FROM US TO YOU

THE popular wish among beekeepers is better prices in 1941. We may accomplish much toward that goal by doing all possible to develop the underlying sales factors building up demand to keep pace with supply, boosting every constructive effort toward such improvement.

HENRY.

♦

HAPPINESS may lie in the possession of worldly goods, it may lie in the accomplishment of a particular job, or perhaps simply in the quiet, peaceful life of the average American. It may lie in as many different directions as there are different persons. But surely happiness is everyone's goal, and that is what I wish all of you today.

BOB.

♦

AT this season and particularly at this stage in the world's progress I should like to send greetings to all those readers whose holidays, may be darkened by the smoke of battle. Can we in all humility speak to you the old, hackneyed words of the Christmas season—words oddly fresh, hearty, and filled with sincerity and grace?

JIM.

♦

THE finest things that have come to us are because of the friendships we have formed along the way. These associations are priceless and many of them have endured through the years. Beekeepers are a friendly people. If a man may be called rich in proportion to the number of his friends, those who follow honey production should be classed as a prosperous group. Let us seek to have more and better friends.

FRANK.

MANY of us are discouraged over rapidly declining prices for honey; honey markets are chaotic and we find it hard to see our way out of the dilemma. Let us have better cooperation among all persons in our industry. Rally to the call of the Institute campaign. It will turn the tide and everyone will have a better and more prosperous year in 1941.

LOUIS.

♦

ACTIVE pleasant work with your bees, without a load of of overhead and debt which may cause you worry and anxiety; enough spare time for your family, whose bringing up should be your prime aim in life; sufficient remuneration for a comfortable living; an active part in your community's and country's upbuilding; may these all be yours in 1941.

MAURICE.

♦

FOR your prosperity and well being I wish you all good health through 1941 and the ensuing years; a healthy body with which to perform your necessary functions, healthy mind and spirit with which to face the future.

♦ ROY.

MY wish to you is that you may have joy of accomplishment and pride in the things you do. It is not necessary to appear great in the eyes of other men. The bees fed and packed, the honey stacked away in cans, the floor swept clean may all be exchanged for the pleasure of having achieved. Find pleasure in your daily work. It is the means of obtaining happiness.

♦ SWANNY.

GOOD hunting, friends, next year; not for game but for bees! The best honey gatherers have escaped us. Other animals have been improved vastly more than bees; for more beef, more eggs, more milk, more wool, more bacon. Although honey prices are bad, we CAN get more honey from each hive at the SAME COST. So good hunting, friends, in 1941.

GLORY.

EDITORIAL

THIS YEAR'S BIG NEWS

WE want every reader of this magazine to see the report on another page of this issue of the action taken by honey packers, supply dealers, and honey producers at Omaha. When the dealers in honey get together with a constructive program to build the honey market through friendly co-operation we can look forward confidently to better demand and better prices for our product.

In view of the large sums used for publicity for other foods the twenty thousand dollars raised at Omaha looks small but the fact that it could be done is encouraging.

The action taken at Omaha may well mark the turn which will lead to a period of prosperity such as the beemen have not known for many long years. Read the story and join the group offering loyal support to the American Honey Institute in its educational campaign.

♦

VACANT LOTS FOR BEE PASTURE

A very practical suggestion comes from G. S. Oettle, of Chatham, New Jersey, who proposes that the beemen make use of the vacant lots for bee pasture. In view of the widespread interest in city improvement and the activity of garden clubs in that direction, the beeman can readily secure plenty of help. If the beemen will provide the seed and some direction they can in many cases secure the help of such organizations in the planting of waste places to flowering plants which are good sources of honey.

By selecting perennial plants which are attractive in their flowering habits it may be possible to secure benefits which will last for a long period of years and add much to the appearance of the locality. Organized effort in this direction can accomplish wonders. What local beekeeping group will be the first to demonstrate the possibility of improvement that lies in Mr. Oettle's suggestion?

A HONEY SLOGAN

BEEMEN have long sought for a good slogan for use in connection with the advertising of honey. One of the best that we have seen appeared in connection with the display of A. J. Sentz, of Snoqualmie, Washington, at the Western Washington Fair. This was shown on page 514 of the November issue of American Bee Journal.

"Honey the Gift of the Flowers" is a really suggestive and pleasing slogan, and can well be used in connection with the advertising of our product as the "Say it With Flowers" has been used by the florists. Rightly used this line can be turned to very good account by the beekeeping industry.

♦

THE TRUTH WILL SELL HONEY

RECENTLY a member of the faculty of a great American University in a public address made some comparisons of honey and sugar. It was not an attempt to boom one product at the expense of the other but a simple statement of fact as to where the differences lie.

Recent investigations indicate that the minute quantity of minerals found in honey and which are lacking in commercial sugar may be of great importance in human nutrition. The list of minerals which honey contains is a long one and there are other things also the value of which may not be fully understood.

It is not necessary to make extravagant claims for honey. If only the truth is told, as a specialist in human nutrition can tell it, the demand will shortly increase to such a point as to consume all our surplus. The public listens with respect to those who speak with authority. We have only to note the enormous increase in the consumption of carrots which came as a result of making public the information that this vegetable is rich in vitamins.

Our problem is how to inform the public as to

the proper places of honey in the human diet. Let this one thing be done and there will be no difficulty in moving all our honey at a reasonable price.

♦

WAR MARKETS

THERE is evidence that after a slow start our markets are feeling the effect of war demands. The first to feel such stimulation must of necessity be such articles as are necessary to the conduct of actual hostilities. With such large numbers of men engaged in combat the production of food and of manufactured articles for everyday use is greatly curtailed.

As supply diminishes the demand will increase and prices will rise until, in all probability, there will be a period of wild speculation and great uncertainty. Unfortunately every boom is followed by a bust and plans should be made accordingly. Prosperity built on a war demand is usually short lived and leads to disaster. It is never safe to make commitments far ahead based on such demands.

♦

PLANTING FOR HONEY

A letter coming to this office asks advice about planting for honey because the location in which the beekeeper lives is very poor. A number of similar letters have recently come from those who propose to make an effort to better the situation by planting something known to yield nectar freely.

It has long been assumed that planting for honey alone would not pay. That is probably still true if one were to use productive land which can be turned to account for the cultivation of profitable crops. Now, however, we find available a large acreage of land not directly profitable otherwise. In such cases the beemen can turn it to his advantage with little effort and small cost.

Where seed is scattered on land without any preparation, a large portion of it will be wasted but if the topsoil can be stirred so that the seed falls on a prepared seedbed it should be possible to get a good stand of plants under favorable weather conditions.

For such use it is far better to sow a mixture of different plants than to depend upon any one thing. If long lived perennials are used good bee pasture should follow for many years.

Three plants have proved especially valuable on the grounds of our field editor who has had them under observation for a period of more than 25 years. They do not spread in a way to become pests as do many weeds but are very permanent and never fail to attract the bees.

Crown beard or wingstem, (*Actinomeris alternifolia*) is native to the region from Ontario to New Jersey and westward to Kansas and southward. It grows about six to eight feet tall and has bright yellow flowers in late summer.

Figwort, (*Scrophularia marilandica*) occurs from New England to South Carolina to Kansas and Louisiana. It is also a tall growing plant with small and inconspicuous flowers but yields nectar so freely that it is always swarming with bees and other insects.

The third plant in this list is the common catnip which has been naturalized from Europe and is now found in the vicinity of farm houses over an immense scope of country. The blooming period is also late summer.

There are others which may well be added to the mixture but these three have proved so uniformly attractive to the bees for such a long time that we are confident that with a sufficient acreage the beekeeper would be assured a late summer crop.

The seed of both figwort and catnip is very fine and a large number of plants can readily be secured from a small amount of seed if properly handled. Anise-hyssop is worthy of consideration also.

If the seed is scattered in late fall or early winter it should germinate in early spring and get well started before the soil drys out.

Motherwort is another very attractive bee plant which is somewhat more weedy in nature than the three above described but it is not likely to become a weed pest. Horehound is sometimes planted but the honey is amber in color and strong in flavor.

THE FALL BONESET AS A HONEY PLANT

By HARVEY B. LOVELL,

University of Louisville

LOUISVILLE, Kentucky, the second largest metropolis in the Old South, lies on the fertile flood plane of the Ohio River. The city owes its location to an ancient coral reef which stretches across the channel, producing a falls around which river traffic before the construction of a canal, had to portage it cargoes. The rich valley around the city produces a large amount of fruit and garden produce much of which is dependent upon the honeybee for proper pollination. Probably because the intensive cultivation of the land has destroyed their homes, the wild solitary bees are not very numerous and do not seem adequate for pollination of the crops. Luckily a considerable number of the farmers and horticulturists keep bees, although the honey yield is only fair. The real importance of the hive bee in this area is its service in pollination.

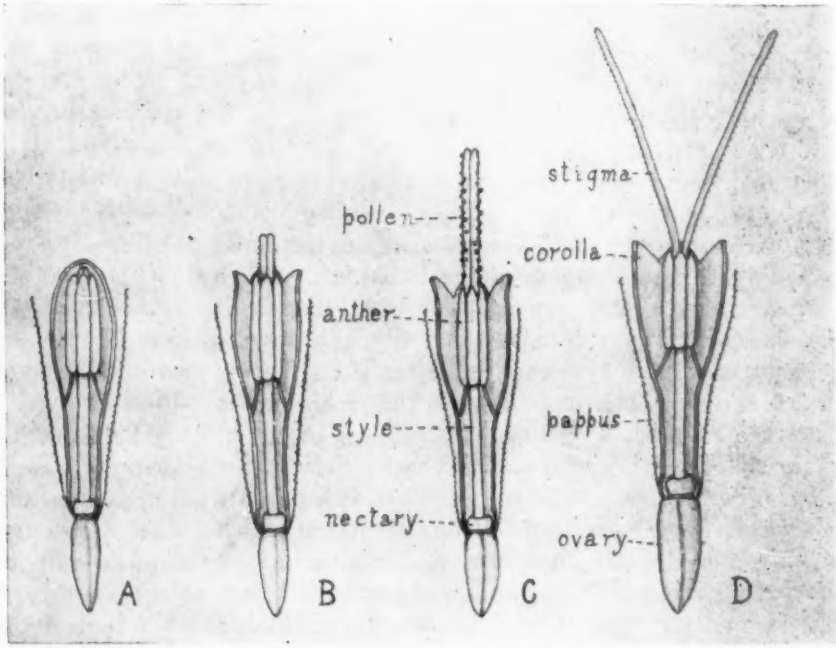
But fruit trees and other crops alone seldom furnish a steady enough nectar flow to maintain a colony throughout the season. In the fall especially bees must become dependent upon wild plants if they are to prove profitable or even survive.

During the latter part of August and the first two weeks in September is a period when honey plants are relatively scarce in this locality. The summer plants have run their course and the autumn goldenrods and asters are not yet in their prime. One species of plant and one alone by reason of its abundance and nectar yield very adequately bridges this gap—the fall boneset, **Eupatorium serotinum.** This plant flourishes along roadsides and in old fields, often completely taking over waste land. The plants grow from three to five feet tall, are profusely branched, and every branch bears numerous clusters of tiny white flowers. It amazed me to discover how many individual flowers were in bloom at the same time on a single plant. A plant selected at random was found by actual count to have 1795 heads of averaged thirteen tiny florets for a grand total of 23,335.

To better understand how and why this plant is so important to the honeybee, let us dissect a series of flowers in various stages of development. In the diagram, (A) represents a bud and (B) a partly opened flower in both of which the reproductive structures are immature. The ovary of the pistil is buried in the base of the flower (inferior) and crowned by a fleshy nectary, from the center of which rises a slender style bearing on its tip a pair of elongated stigmas with their fertile surfaces pressed tightly together. The five anthers form a ring around the style. The corolla-tube is 2.5 mm long (one-tenth inch), a length which makes the nectar readily accessible to the honeybee as well as a host of other insects.

As the flower continues to expand, the style and stigmas lengthen, thrusting their way up through the encircling anthers. The inside of the anthers open and the pollen is discharged against the outer surface of the stigmas. These are covered with tiny projections which carry the pollen grains upward into the open, where they are exposed to the visits of insects. The flower has entered upon the staminate or male stage of its life history (Fig. C). The nectary at the base of the flower has meanwhile been secreting nectar, and the busy bees, as they probe for the liquid, brush against the stigmas and carry away the pollen on their hairy bodies.

After two or three days of existence as a staminate flower, an important change takes place in the flowers of the bonesets. All or most of the pollen having been removed, the pair of stigmas gradually separate until their inner fertile surfaces are exposed. The flower now enters upon the pistillate or female stage of its life (Fig. D). Since the nectary continues to secrete bees continue to find the flower attractive. As they thrust their tongues down into the tubular corolla, they rub their pollen-covered bodies against the inner surfaces of the stigmas. The



Diagrams of flower stages of Fall Boneset.—(A) Bud; (B) Partly opened flower; (C) Staminate stage; (D) Pistillate stage.

pollen sticks, completing the process of cross-pollination.

The flowers remain much longer in the second stage than in the first, about ten days to two weeks. Toward the end of this period the secretion of nectar gradually ceases, thus bringing to an end the blooming period.

The reader may well ask the question, "Are flowers which pass

Mist flower, a conspicuous purple flower, attracts few insects in spite of its beauty.

through two stages in blooming especially valuable as nectar producers?" The answer must be "Yes, they usually are." Since they must produce enough nectar to bribe insect visitors during both stages of blooming, the period during which the flowers are honey yielders is greatly extended.

The writer has found the fall boneset abundant throughout the neighboring counties as well as in southern Indiana and Illinois. Pellett refers to it as being valuable in Illinois (American Honey Plants) and John Lovell mentions that it is an outstanding honey plant in southwestern Kentucky (Honey Plants of North America). This species of boneset is evidently valuable over a wide area and deserves more attention than is usually given it.

The bonesets are represented by several other species in northern Kentucky. The well-known common boneset or thoroughwort **(Eupatorium perfoliatum)**, which is so important a source of honey in many parts of the country, is not abundant enough around Louisville to be of much value.

The white snakeroot, woodland boneset **(E. urticaefolium)**, yields nectar in rich open woodlands, but its value is restricted by the scarcity of its proper habitat.

The purple boneset or joe-pye weed **(E. purpureum)** is occasionally abundant in damp areas along water courses and is eagerly sought by the bees.

Finally, the dainty mistflower **(E. coelestinum)**, one of our most attractive fall flowers, blooms profusely along roadsides and in open woodlands. Unfortunately it is so

Below, the White Snake-root, an excellent honey plant in rich, open woods. At right, Fall boneset plays host to a Viceroy; a leading fall honey plant in northern Kentucky.

nearly nectarless that one may watch a patch of it for hours without seeing a single insect on its purple inflorescences.

♦

EDWIN W. TEALE'S "THE GOLDEN THRONG"*

(A book about bees, reviewed by Dr. Bodog F. Beck.)

THE author of "Grassroot Jungles," (Dodd, Mead & Co., 1937), a fascinating book on insects, with 130 striking photographs taken by the author himself, supplemented our bee literature with an invaluable addition, appropriately named, "The Golden Throng." Selecting the bees, the aristocrats of the insect world, among all other insects as a special subject, was very fortunate.

Mr. Teale is not a professional entomologist but a thorough student of insect life and a great admirer of bees. Every page of the book reveals this distinction and confirms an enthusiastic appreciation of these puny, perplexing but useful creatures. The book is non-technical, entirely devoid of scientific terminology and delightfully written for an intelligent and interested public.

The most striking feature of this splendidly executed book is the over seventy unusual and remarkable photographs taken by the author. No finer pictures can be found anywhere on bees. It is a prototype of a modern bee-book. Only the most recent progress of photography, improved and faster films, better aids to lighting enabled the author to record such delightful candid-camera pictures of the "golden throng." The pictures are splendid products of modern art. No bee-lover, turning the pages of this book and glancing at the photographs could resist the temptation to procure a copy.

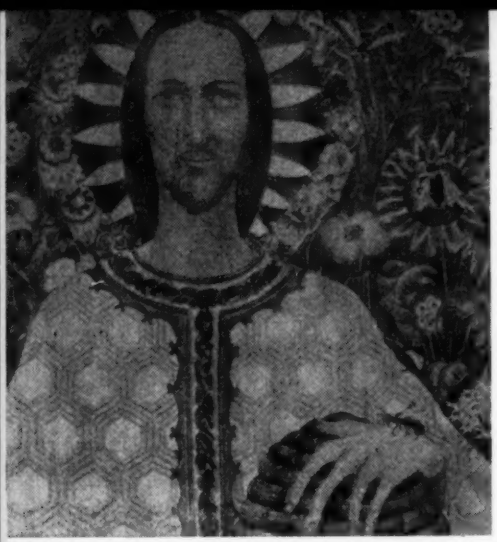
Present-day beemen are really in an enviable position to possess such an illustrative expose of the fascinating bee-world. It is a veritable graphic account of bee-life. And they say, a picture is worth ten thousand words.. Pictures produce a more vivid, profound and lasting impression on both understanding and memory than scripts. John of Damascus, by the way, denoted pictures as "poor men's books."

Ancient bee literature, contrasted with our modern books, among which, Mr. Teale's "The Golden Throng" is a foremost example, is as strikingly different as an infant compared with an adult. In ancient times honeybees lived in invisible nests, in the cavities of trees and rocks. Even the first primitive hives concealed the wonderful activities of these industrious creatures and their life was an utter mystery. The most excellent ancient observers of bee-life had to guess and speculate. Our bee knowledge commenced to progress after the construction of the glass observation hives and the discovery of the microscope. The truth could be demonstrated and not solely imagined.

Mr. Teale's book is vividly and competently written. It is a combination of intriguing natural history and brilliant art and beyond all praise. A genuine souvenir-book about an admirable commonwealth, so similar but far superior to that of man.

The book is highly recommended as a worthwhile supplement to the library of any bee-lover.

*Dodd, Mead & Company, 1940.



LORD, BLESS THOU THE BEES!
"They teach us Diligence, Economy and Order;
With Wax they serve the Altars of Churches;
Their Honey provides Food, Drink and Medicine;
Their Lives are sacrificed to restore Infirmities."

♦

A TWO YEAR COVER SERIES

THIS issue begins a series of cover pictures and accompanying articles recording and illustrating a few of the many interesting facts concerning bees in the social life of man. We are indebted to Dr. Bodog F. Beck of New York City for this fine material. Pictures are taken from his large and expensive collection which is probably unique in the world of pictures. Nobody is as well versed in the history of the honeybee in its relation to the life of man as Dr. Beck. We feel extraordinarily privileged to be able to publish this material.

Our readers will recall that Dr. Beck is among the first physicians of modern times to use the venom of the honeybee in the treatment of human disease. His methods are gradually coming into use among physicians throughout the country. Dr. Beck's book "Bee Venom Therapy" describes his procedure and the results of his work. In a second book, "Honey and Health" Dr. Beck has contributed one of the most important treatise on the use of honey in the diet that has ever appeared.

This series of cover illustrations and articles will give some idea of the fascination which is attached to the part which bees have played in history. The subject is voluminous and Dr. Beck is preparing a third book "Bees and Mankind, A Biography of the Honeybee," which will tell much more about the folk lore, superstitions, and the place which the honeybee has in religion, literature, art, music and other phases of human social life.

BEEKEEPERS AND THE SOIL CONSERVATION PROGRAM

By R. L. PARKER,

Professor of Apiculture, Kansas State College.

THAT part of the Soil Conservation Program to offset the overbalanced cash grain crop system of cropping and to improve soils was initiated in 1937. During that year, plans were made for the crops to be grown in 1938. The plans for planting of legumes in Kansas during 1938 were to seed and have 1,250,000 acres in alfalfa, 537,000 acres in white sweet clover, 1,050,000 acres in red clover and grasses and 2,000,000 acres to be in fallow. Under these conditions there would be a tremendous increase in the acreage available for bee pasture. Another factor which would enter the scheme would be a strong increase in demand for seed of the crops mentioned.

The usual estimate of the number of colonies per acre for honey production is one colony per acre. The one colony per acre would serve to gather nectar for honey production as well as the aid in seed production of the several legumes. At the present time, following several years of drought, it is estimated that there are about 25,000 colonies of bees in the eastern half of Kansas. Under favorable conditions for beekeeping with this planned increase in acreage of legumes, there should be 300,000 to 500,000 colonies of bees in the eastern half of Kansas to gather the available nectar.

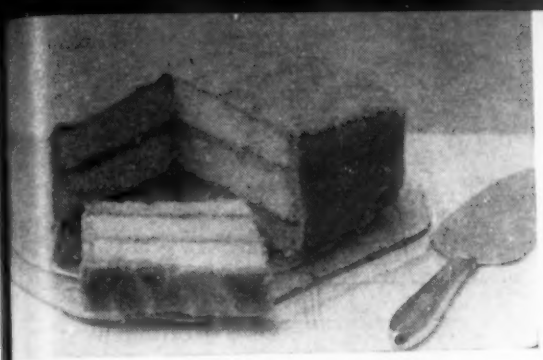
Field conditions in eastern Kansas during the months of May and June, 1940, showed that there was a considerable acreage of yellow and white sweet clovers which was allowed to bloom. During these months, several entomologists made trips through eastern Kansas in the Soil Conservation areas and noticed that there were few to no honeybees working the sweet clover plants. This would indicate that there was an extremely small bee population for the then present preponderant sweet clover acreage. In other words, as far as honey production in beekeeping was concerned, there was considerable acreage devoted to the growing of sweet clover which was being wasted. As a rough estimate, there was only one-fourth to one-half crop of honey gathered at most and the remainder was lost due to the fact that no bees were present to gather the nectar which was available in the plants. A similar situation also occurred in relation to an alfalfa honey crop in central Kansas.

The estimated number of acres devoted to growing certain legumes in Kansas for the year 1938 was somewhat under the planned number of 1,250,000 for alfalfa and 537,000 for sweet clover. In 1938 there were less than half of the acreage or 394,000 acres in alfalfa from which hay was harvested and of these acres, 84,000 were used for seed production. In 1939 there were 410,000 acres utilized for hay production and of these acres 105,000 were used for seed production.

The sweet clover acreage in 1938 was much less than was planned to be grown for that year, namely 537,000 acres. Only a small part of this planned acreage was planted to produce a seed and a hay crop and was 36,000 acres. In 1939 there were 39,000 acres used to produce sweet clover seed and hay. The greater part of the area was used for seed production, namely 34,000 acres.

This situation brings to mind what should be done for the future since this program of the use of sweet clover in the cropping rotation is to be present for a long time to come. There is a golden opportunity present for beekeepers in the areas in which alfalfa and sweet clover are a definite part of the Soil Conservation Program. There is an assured source of nectar each year and if colonies of bees are not available to gather nectar from these fine plants which are of much benefit to beekeeping, there will be a decided loss of a sugar crop in the state of Kansas. If beekeepers are near these areas in which the Soil Conservation work is being carried on, there is an excellent opportunity for increasing the number of colonies they now have and thus produce more honey than they have in the past.

There will be mutual benefits to the farmer as well as to the beekeeper in the pollination of alfalfa and sweet clover. The bee seeking nectar brings about the pollination of the flower and thus assures a seed crop, and, at the same time, gathers nectar and converts it into honey for the beekeeper.



TWO CAKES FOR CHRISTMAS EVE

Mrs Adam Bodenschatz

Yellow honey cake, above; white honey cake, at right. And good, too.'

HONEY YELLOW CAKE

½ cup butter
¾ cup light honey
¾ cup sugar
4 eggs, well beaten
1 cup milk
3 cups cake flour
3 teaspoons baking powder
¼ teaspoon salt
Vanilla if desired

1. Sift flour once before measuring. 2. Add baking powder and salt and sift four times. 3. Cream butter. (Add vanilla if desired.) 4. Add honey, cream again. 5. Add sugar, cream again until light and fluffy. 6. Add the beaten eggs. 7. Add the sifted dry ingredients alternately with the milk, starting and ending with the dry ingredients. Mix well. 8. Bake in three greased 9-inch layer pans in a moderate oven (350 F.) until done. (25 to 30 minutes.)

Note—If you wish a real yellow cake add 5 or 6 drops of butter color to the butter. If you do not cream your shortening, honey and sugar well your cakes will have a shaded appearance. Tap the pan several times on the bottom after you put in the batter. This will take out the large air bubbles. Place in the oven at once.

Honey Caramel Frosting

2 cups granulated sugar
1 cup brown sugar (well packed)
¼ cup light honey
¼ cup butter
¼ teaspoon cream tartar
1 cup evaporated milk.
Vanilla if desired

Mix well and boil to soft ball stage stirring constantly, or it will curdle. Remove from fire. (Add vanilla if desired.) Cool slightly, and beat until cool enough to spread. Add more milk if needed.

HONEY WHITE CAKE

½ cup butter
¾ cup light honey
¾ cup sugar
6 egg whites (beaten stiff)
1 cup milk
3 cups cake flour
3 teaspoons baking powder
¼ teaspoon salt
Vanilla if desired

1. Sift flour once before measuring. 2. Add baking powder and salt and sift four times. 3. Cream butter. (Add vanilla if desired.) 4. Add honey, cream again. 5. Add sugar, cream again until light and fluffy. 6. Add the sifted dry ingredients alternately with the milk, starting and ending with the dry ingredients. Mix well. 7. Fold in the beaten egg whites. 8. Bake in three greased 9-inch layer pans in a moderate oven (350 F.) until done. (25 to 30 minutes.)

Seven Minute Honey Frosting

2 egg whites, unbeaten.
1½ cups sugar
1 tablespoon light honey
5 tablespoons water
Vanilla if desired

Mix egg whites, sugar, honey and water in top of a double boiler thoroughly. Place over rapidly boiling water, beat constantly with rotary egg beater for 7 minutes, or until frosting will stand in peaks. Remove from the boiling water, (add vanilla if desired.) Beat until thick enough to spread.

Mrs. Adam Bodenschatz,
Lemont, Illinois.

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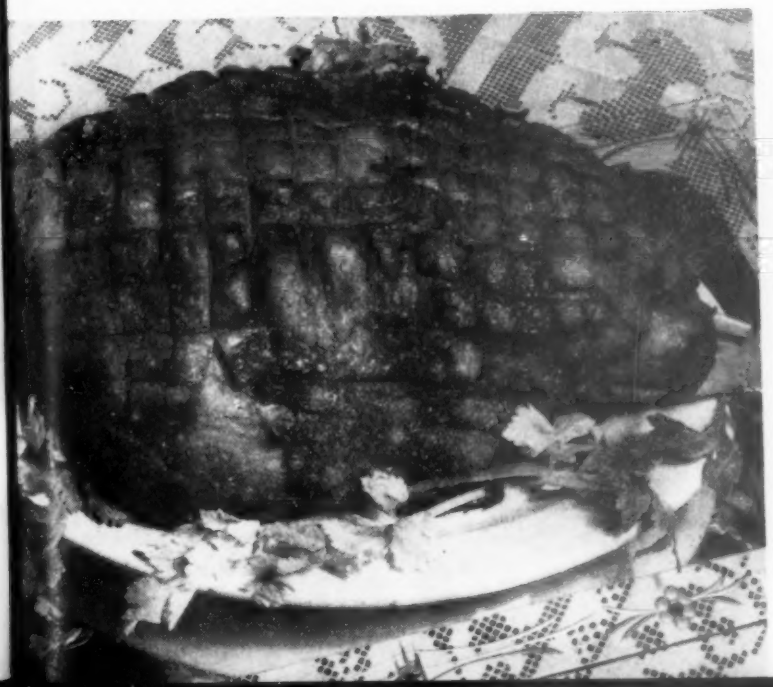
A CHRISTMAS HAM— MRS. A. J. SCHULTZ, Ripon, Wisconsin



One 10 or 12 lb. ham, tenderized. Place ham in roaster with paper wrapping on as it comes from the market. Bake 1½ hours at 350 degrees fahrenheit; then remove paper wrapping and score fat side with a knife and springle with ground cloves and pour over 1 cup honey in a fine stream so as to let it run down in the grooves of the fat. Bake 1 hour at 300 degrees fahrenheit. Your ham is now ready to serve. Be sure to have your your roaster covered at all times. Your ham will shrink but a very little.

Mrs. A. J. Schultz,
Ripon, Wisconsin.

Mr. and Mrs. Schultz are among Wisconsin's most energetic and skillful beekeepers, with fine equipment and business like management. Their interest in better markets is keen. Mrs. Schultz is active in promoting honey uses and she is especially able in adapting honey to home uses.

This very ham gave us sandwiches and for days it continues to reach out to fortify appetites. (Mrs. A. J. Schultz, at right.)

COMB HONEY—PART VI

Cleaning Equipment

By CARL E. KILLION

REGARDLESS of the style of super used, supers should be free from propolis before they are returned to the hive each spring. In winter, the bottom and top edges of the supers as well as the insides should be scraped. The room in which this scraping is done should be cool. The supers may be stored in a cold room and only a few brought into the scraping room at one time. A very good scraping tool may be made by cutting an old hand saw blade into small pieces. The size I like best is about two by three inches. Using several of these alternately, considerable scraping may be done before sharpening is necessary. They are best sharpened by stroking the file across the edge, not making a sharp, one-edge blade.

In scraping the separators, a board about six inches wide and two feet long is nailed on the table and extended about three inches over the edge. All separators are scraped on this board, which facilitates picking up or turning the scraped separators. The edges as well as the flat sides of the separators are cleaned. Even the small wedge sticks are scraped and saved from year to year. However there is always some breakage of these sticks.

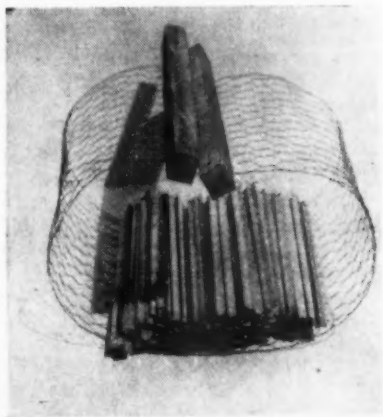
The bee escapes, T-tins and super springs are all cleaned by boiling them a short time in a strong solution of lye and water. To the contents of an ordinary wash boiler, two cans of lye should be added. More lye may have to be added from time to time, depending on the amount of equipment to be boiled. The water is kept boiling.

The escapes are boiled in a small basket made especially to hold them. It takes only about two minutes to boil each basketful, and afterward they are thoroughly rinsed in clear water and set aside to dry. A good drying tray is a moving screen, as it has a rim around it. It can be set over a heat source and it allows good circulation of air which makes for rapid drying.

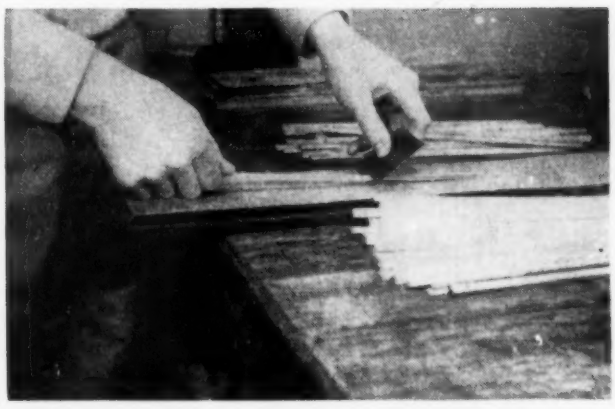
A piece of poultry netting is used to hold the T-tins when they are boiled. All that is necessary is a piece about twelve inches wide and forty inches long, to each end of which is nailed a stick an inch square by sixteen inches long. Approximately a double handful of tins should be boiled at one time. Raising and lowering the netting and moving it back and forth lengthwise of the tins helps the lye solution to penetrate to all parts. Boiling is followed by the clear water rinse and the tins are partially dried and stood on end in boxes for further drying.

The springs are handled like the escapes; always the drying should be as rapid as possible to prevent rusting.

Boiling should be watched. If the tins appear to have a sort of yellow gum on them, more lye should be added to the solution. It may not take more than the addition of half a



Right column, netting for handling T tins while boiling in lye water. Left column, wire basket for holding bee escapes and super springs. Below (left), a moving screen used for drying springs. (Right) Scraping the small super wedge sticks (piece of old hand saw for scraper.)



can to last for some time. None of the lye water must be permitted to touch the hands, face, or any part of the body. Care must be exercised in this matter.

During the winter, not only super equipment is cleaned but all brood chambers not in use are checked. Many hive bodies have been filled with honey and stored for spring feeding. These combs are looked over and all burr combs are scraped off to facilitate handling them when they are given to colonies needing food and room. I find winter is the best time to repair equipment. Repairs in the summer cause needless delay in the field work During the winter, too, one can devise improvements in equipment and apiary management. New gadgets can be made for trial later on.

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About The Cover Picture

CHRIST WITH A HIVE AND BEES

By DR. BODOG F. BECK

NO other creatures in this wide world of ours have been so closely associated with deities and religion as the bees. Bees, and their products, honey and wax, were regarded sacred among the peoples of all continents. Not only pagan races esteemed the bees but also the Christians, who considered them the favorites and servants of God and of the Holy Church. Bees were looked upon as symbols of higher emotions and of the spiritual ego. Ancient writers, when they referred to the Creation, placed bees subsequent to man. Virgil thought that the bees possessed a divine spirit (Esse apibus divinae mentis, **Georgica** IV. 219) Bees were never associated with anything base. When Hesiod, (8th century B. C.), one of the oldest observers of bees, remarked that "gods placed toil before talent," he had the hive in his mind.

Honey, the "celestial food," collected from the "virtues" of flowers, was considered by the ancients the symbol of purity, love and wisdom. When people wished to offer something specially holy and acceptable to a deity as an expression of thanksgiving, penitence or atonement, we find that honey was universally used in these consecratory rites. During ancient Greek religious ceremonies, honey instead of water was poured on the hands of worshipers to keep these pure and deliver them from everything that causes pain, harm or defilement. Honey was believed to purify the tongue. In primitive Baptism the neophyte drank a cup of milk and honey. "The new-born in Christ" partook of the foods of infants. St. Jerome mentions among the "unsanctioned rites" the cup of honey and milk. In one of the magic papyri (Berlin) the believers are thus instructed: "Take honey with milk, drink it before the rising of the sun, and there shall be in thy heart something that is divine."

According to the Koran, "It is God's special order that the bees should be treated with respect because Allah gave them lessons in morals." The sixteenth chapter of the Koran, "The Bee," compares human life with the activities of bees. "Man, like bees, should enjoy everything, but collect only the best and after a diligent and harmonious life should return home on the path God destined him." The importance of the bees is clearly established in the Koran: "The Lord spake by inspiration unto the Bee, saying, provide thee houses in the mountains, and in the trees, and of those materials wherewith men build Hives for thee; then eat of every kind of fruit, and walk in the beaten paths of thy Lord."

Beekeeping received a great impetus after the introduction of Christianity. In the Middle Ages apiculture was considered a prerogative of monasteries. Bees were cultivated by the clergy to produce honey for religious rites and wax for church candles. No Mass could be sung without pure beeswax candles. Wax, extracted by the bees from flowers, symbolized the pure flesh of Christ which He had received from His Virgin Mother; the wick signified the soul of Christ and the flame, His Divinity. The latter two could be found in other kinds of candles but the first only in those made of pure beeswax. For Easter services, the image of Virgin Mary had to be imprinted on them. Burning candles were supposed to drive away the evil spirits during funeral services.

The venerable association of Christ with hives and bees is a deeprooted tradition. The ancients believed that all good things come from heaven. The bee, the comissary of food, medicine and most delicacies, the purveyor of the Church, on account of its close affiliation with God and man, was the accepted symbol of Christianity. Bees were chosen to impersonate the purest, most noble moral virtues and sterling attributes, like prudence, foresight, industry, and economy. The tiara of the Pope, the Vicar of Christ, was copied from the old-fashioned skep. The bees were believed to have originated in Paradise where they were also admitted.

Bees were supposed to have been in great and special favor with the Lord and the Holy Virgin. They were often called "Ancillae Domini" (maid servants of the Lord). In old Swabia and Westphalia, the bees were called Hergottvogel (birds of the Lord) or Marienvogel (birds of St. Mary). In Yorkshire there was an old custom that the population congregated around the hives on Christmas Eve. The humming of the bees would announce the exact time of the birth of Christ.

Woodward, in a poem, refers to the belief:

"On twelfth day morn, old Christmas day,
Ere midnight scarce be passed away,
'Tis by our country folk averred,
And let no scoffer doubt our word,
That oft as Yule-tide whesleth round,
The bees in hive be weather bound,
Hum only on this night for mirth,
In worship of our Saviour's birth."

Other domestic animals are supposed to stand up in their stalls for a moment in reverence of the birth of Christ and then lie down again.

In Bedfordshire peasants sang psalms before the hives, praying that the bees should thrive. The Bohemian name for the bee is vcela (from the forehead). According to the legend during the sorrowful hours on Golgotha the bees carried away the sweat from the forehead of crucified Christ, thus affording relief to the Lord. The day Christ arose from the dead and appeared before His Disciples, He asked for food. They gave Him broiled fish and a honeycomb (Luke 24:42). Christ ate the food to prove to the Apostles that He was truly resurrected and not merely a Spirit or a Thought. John the Baptist, in his camel's hair raiment, ate dried locusts and honey in the wilderness (Mark 1, 6; Matt. 3, 4).

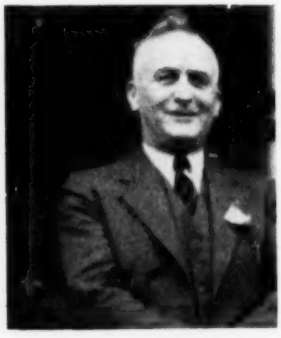
In the old Spanish religious symbolical drama, El Comenero Divino (The Divine Beehive), by Tirso de-Molina (1630), Christ is represented as a beekeeper. Disguised in a beekeeper's attire, a vestment of honeycomb pattern, He appears on earth holding a skep in His hand, encircled by a swarm of bees. Joy, the shepherd boy, recognizes the Lord and asks Him for His mission. "You must be in love with something here, leaving Your Father's lofty realm." Christ replied that He is in love with the Bee (the soul) and wishes to establish an apiary (church) on earth. It represents the redemption of mankind through Christ.

(Please turn to page 566)

OFFICERS OF AMERICAN HONEY INSTITUTE

Chairman, Board of Directors	Manager and Sec.-Treas.	Vice-Chairman of Board
 L. W. Parks	 Mrs. Harriet M. Grace	 A. G. Woodman

BOARD OF DIRECTORS— Balance of Members*

 R. E. Foster Gainesville, Florida	 R. F. Remer Sioux City, Iowa	 L. C. Dadant Hamilton, Illinois
 M. S. Stone Ogden, Utah	 M. J. Deyell Medina, Ohio	 Dr. V. G. Milum Champaign, Illinois

*Executive Committee—L. W. Parks, R. F. Remer, M. J. Deyell.

(H. M. Krebs, California, is also a member of the Board of Directors, but unfortunately, we have no picture from him for these pages.)

OFFICERS OF AMERICAN HONEY PRODUCERS' LEAGUE

President

John Holzberlein
Denver, Colorado

Vice-President

Eugene D. Cutts
Montgomery, Alabama

Secretary-Treasurer

Louis Hines
Omaha, Nebraska

INSTITUTE BOARD MEETING

The Board met on October 22 at Hotel Paxton, Omaha, Nebraska. Present were: Lewis W. Parks, A. G. Woodman, L. C. Dadant, M. S. Stone, V. G. Milum, M. J. Deyell, and Harriet M. Grace.

A full report of the Director Mrs. Grace, was read and approved. This included financial report as well as report of accomplishment during the past ten months. While the financial condition of the Institute is satisfactory, more funds are needed to enlarge the scope of the work being done. There are constantly demands coming into the office of the Institute which cannot be met because of lack of funds.

One of the outstanding services which the Institute renders beekeepers and users of honey everywhere is the quantity of printed materials such as recipes, booklets, etc., which are available and being distributed.

The following officers and committees were elected for the coming year:

Chairman—L. W. Parks, Watertown, Wisconsin.
Vice-Chairman—A. G. Woodman, Grand Rapids, Michigan.

(Please turn to page 563)

NATIONAL BEEKEEPERS' AUXILIARY OFFICERS

President, Mrs. T. W. Burleson
Waxahachie, Texas

Secretary-Treasurer, Mrs. E. H. Bremer
San Antonio, Texas

Vice-Chairman, F. B. Paddock
Ames, Iowa

Secretary-Treasurer—Clay Lyle
State College, Mississippi

OFFICERS OF APIARY INSPECTORS OF AMERICA

H. M. Krebs, Sacramento, California, remains as Chairman but there is no picture of him available.

THINGS HAPPENED AT OMAHA

PROBABLY the National Convention, at Omaha, October 22-24, will go down in beekeeping as one of the most interesting and history making gatherings those interested in the honeybee and in honey production have every attended. It was a great convention in that thirty-eight states had representatives there; great in accomplishment in several outstanding ways; and great in its infectious enthusiasm.

Outstanding was the surprise fund; twenty thousand dollars to make America honey conscious, subscribed to by the honey packers, bee supply manufacturers, and many of the beekeepers. How it actually started rolling perhaps no one may be quite sure, but the packers and manufacturers set the first fire and some good engineer supplied the sparks (probably Lewis Parks) when they "somehow" got herded together informally on a train bound for the Convention City. It took three and four cent honey, several years of it, to set enough tinder for the sparks to work on. The rest seems almost spontaneous. It shook the Convention like a blast. If beekeepers in general will get behind the program each year, honey will soon find its own orderly market and its own profits.

Was there ever a banquet quite so big? Turkey, too! State after state rose to claim attendance and a capable young lady accordionist sang state songs all over the place and got the delegates to off-cord on it, too. The floor show was a diversion quite the style of the airways. Paddock, as toastmaster, took a ribbing on geography.

Never saw a better mixture of our most important officials—scientists, inspectors, extension men—and big scale beekeepers. Sometimes the men with the most investment seem to fight shy of meetings. Maybe they are bashful and over modest. (Or maybe they are "superior"). Not so at Omaha. There is no account of the thousands of colonies represented but men with five to ten thousand colonies were there, not to set back in dim corners but to listen and to do.

Talks were good. As fast as they can be worked into the Journal, some will appear complete and some in the form of notes. The present set-up of League, Institute, Inspectors, Auxiliary and special conferences is

Here you have them, all those who dared show their faces at Omaha. Not near the whole 500 but you can pick out your favorites.

a grand opportunity for many groups engaged in the different aspects of our work to meet and do what they have to do under the most favorable circumstances. More real business is accomplished in a short time than perhaps with any other arrangement.

When this plan of meeting began, joint sessions were arranged with the Southern Federation. Northern honey producers and Southern breeders have a common command of this industry; their problems are interwoven; their mutual success is important. This year the Southern Federation convened at Tampa, November 18-20. Our next issue will carry a report of the proceedings. The 1941 Federation meeting will be Lynchburg, Virginia. The National Convention will be at Niagara Falls. It is our belief, however, that since many cannot afford to go to both meetings, joint sessions should be held often.

Somehow, the absence of a first-class material exhibit at Omaha, took away interest from the convention. Movement is the life of conventions. Most of us like to wander about, gaze, poke, and see for ourselves.

Too, seems to this reporter, that interest lags badly under the pressure of too much talk. Heavy programs, that keep us on chair.bottoms, create a nervous explosion that sends folks home early and maybe contribute to absence next time. The three ring circus that Stewart led off with in the Wabash Round-up always brings the crowd back and has done so steadily for a number of years.

Heavy emphasis on marketing again in this program. In the old days it was behavior, what bees do, and what to do about it. Now its how to use honey, and how to sell it at a profit. Considerable emphasis on how to produce more honey at less cost Four cent honey does that. Perhaps the day of the fancier is gone forever and the reign of the commercial man is complete.

Much interest in honey plants. Ever stop to think what might happen if sweet clover skipped out of agriculture? Time to think about it is now, while sweet clover is still king of soil builders and pasture savior. No one farm plant has ever stayed longer and we fear its cycle carries it out after twenty-five years in a spot. So beekeepers should see to it that whatever plant follows clover will do as good.

Much interest too in resistance. From Hambleton's report it looks like the whole experiment is going places. Even the doubters doubt less and the shouters shout louder. Some of the fairy stories banded at Omaha would seem wild if we did not have similar experiences ourselves.

Till Niagara, then. We'll be seeing you.

A TWENTY THOUSAND DOLLAR FUND FOR HONEY

AT a meeting of epoch-marking importance, during the National Convention at Omaha, October 22, 23, and 24, a group of honey packers, honey producers, and bee supply manufacturers determined to raise a fund of twenty thousand dollars for the 1941 publicity program of American Honey Institute. It is imperative to have at least twenty thousand dollars available if advantage is to be taken of the greatly extended possibilities for honey publicity. The program is to be handled by Steve Hannagan Associates, New York, advertising specialist, under direct supervision of the publicity committee of the Institute. This committee consists of some of the chief contributors and is as follows: Lewis W. Parks, Watertown, Wisconsin, Chairman of the Board of Directors of American Honey Institute; John H. Paton, of the J. G. Paton Company, of New York City, Walter . Straub, of Straub Laboratories, Chicago; and Thomas W. Burleson, of T. W. Burleson and Son, Waxahachie, Texas. All of these men are vitally interested in the honey industry, and they have consented to act on this committee because they realize the deep significance of the present downward trend of honey prices and the need of something definite and something important being done to change the trend and to secure greater and more effective publicity and greater sales for honey.

Ever since the organization of American Honey Institute twelve years ago, it has been a serious problem to secure enough money to keep it operating. Some years the funds have almost reached ten thousand dollars, but frequently the amount collected has been only five thousand dollars. With a small budget it has been possible to keep the Institute functioning only in a very limited way. Office salaries and office expenses, consisting of rents, stationery, postage, telephone, and other bills, have reduced the funds that could be spent in actually creating publicity for honey. The Institute has done a wonderful job, considering the small amount of money it has had at its command. For every dollar contributors have given to American Honey Institute, honey has received many times the value of that dollar in publicity. However, many demands for material for publicity have not been satisfied because in the Institute office money and time have been lacking.

It has frequently been said that if co-operation could be secured from the producers, packers, bee supply manufactures, and other members of the industry, the scope of the Institute could be multiplied. Until now this cooperation has not been forthcoming, and the Institute has had to work as best it could with what support it could get. The meeting of the group of honey packers, honey producers and bee supply manufacturers in Omaha marks a wide departure from the old approach to Institute support; a new co-operative spirit is evident; and beekeeping history will probably record that these events pointed the beginning of an upward turn toward the success of the honey industry.

At first, twenty thousand dollars seemed an impossible goal; but because of the convincing report of work done by Steve Hannagan,* many contributors who had hitherto been lukewarm immediately became enthusiastic about the proposed campaign. Three-fourths of the amount necessary has been subscribed by some of the larger contributors, and the fund continues to grow. However, the entire sum of twenty thousand dollars must be raised before a contract with Hannagan can be signed on the dotted line. This money will guarantee the Institute's work for 1941, but **it must be available in advance.** As soon as this fund is raised for 1941, it will be the duty of the honey industry to begin at once a campaign for funds for 1942. Without question, it will be advisable not only to continue the publicity campaign now planned but to enlarge upon it as well, if honey is to get the attention it deserves and we all want it to have!

Every producer, every packer, every bee supply manufacturer, every editor, every queen breeder, every package bee shipper, and everyone interested in the success of the honey industry should immediately pledge his contribution to this fund. It has been suggested that producers contribute on the basis of three cents for each sixty-pound can and that packers do likewise. On five cent honey, three cents per can would mean practically the one dollar per ton asked of producers for several years past. Each producer in selling his honey to a packer should stipulate that, for each can, three cents be deducted from his check and that the packer match it with a like amount. In the same way, each packer should ask each producer to handle his shipment on that basis.

This arrangement cannot be compulsory, but so much emphasis should be placed upon it that every important producer and packer will pay his share. One-half of one per cent of sales seems a fair figure on which to base contributions by bee supply manufacturers, package shippers, and queen breeders. Each buyer of bee supplies should request manufacturers to contribute to this fund. The producer of honey who sells his honey crop direct, in sixty-pound cans either to bakers or to others, or who bottles his honey, should pay not less than three cents per sixty-pound can, or one dollar per ton.

We ask our readers to give this matter their most serious consideration. No one should wait for his neighbor to contribute. If everyone were to do that, the Institute would not get a single dollar. If the organizers of the Institute had waited for everyone to contribute, American Honey Institute would not be in existence now! The program contemplated is more wonderful and more vast than anything the honey industry has yet attempted. It is in the hands of the leaders of the industry, and it is up to each one of us to do his part.

A subscription blank and a plea from the Institute will be found on another page of this issue. Every honey producer, every packer, every bee supply manufacturer, every queen breeder, every package shipper, and everyone interested in the industry should say to himself: "I AM GOING TO SUPPORT THE INSTITUTE PROGRAM!"

*See page 550 this issue.

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REPEAT PATRONAGE

Of greatest value to the honey man is Repeat Patronage—or it may be repeated, a steady customer,—yet he cannot be measured in mere dollars and cents, since no one can accurately determine what the steady customer is actually worth.

Potentialities of such a one are infinite, for he has the power to extend business over and over again—lifetime patronage maybe—or even thereafter in some instances through example and influence in his imme-

diate personal or business circle.

While the honey producer is well established in his location, even if he is only anchored at a highway intersection to contact Sunday motorists, nevertheless his success depends not only on getting customers, but on keeping them, upon having folks return again and again for his particular brand of honey and his pleasant service. In the vernacular, the beekeeper must keep on keeping on to get anywhere.

Profitable continuance in the bee business depends on his keeping patronage, on his not only winning but holding the confidence and custom of those once patronizing them. This, in a word, is Good Will that must be sold with the first jar of honey dispensed over the counter or at the impromptu highway stand.

The honey man must keep faith with his customers from the start, and justify the confidence that has been placed in him and his excellent products. He cannot afford to do otherwise if he wishes to secure constant customers, who are the surest foundation for the building of a bee business.

Was it not the Supreme Court itself—those Nine Old Men—who set forth in a legal opinion that Good Will was the disposition on the part of the customer to return again to the place where he was well served. The honey that stands up under such a test from the start is bound to sow the seed of Good Will.

Of course, one of the main ingredients in the sale of honey, one of its prime essentials is that the honeyman must refrain from "cutting corners" on the quality of his product. To dispense honey that is a little bit inferior, even for a lesser sum, is bound to create dissatisfaction and Ill Will in the end rather than Good Will. The honeyman is certain to lose rather than gain customers by this method.

The wise honey producer does not tamper with the possibilities not of losing an immediate and more profitable sale but that of a good customer, of repeat business that should return again and again. For such a beeman knows that the steady customer is worth more than rubies, is worth the best honey he can offer, and is a priceless boon to the permanent upbuilding of his business.

C. M. Litteljohn,
Seattle, Wash.

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In charge of the special publicity fund of American Honey Institute.

CAGING QUEENS AT OPENING OF HONEYFLOW

As a fairly regular reader of the beekeeping publications for more years than I like to think about, I thought I knew most of the answers. In general the same things come up again and again. But one of my beekeeping neighbors sprang a new one on me this season. Just as the sweet clover flow began in earnest, which in this locality means the end of June, he went around and caged all his queens. He says he got forty pounds more per colony than his brother on the next farm, the two lots of bees being comparable in other respects. He thinks that without a lot of young larvae to feed and tend, there are more bees available for field work, while he also contends that the hatching bees and brood in the process of development are consumers of a lot of the honey which is being gathered.

During the last two years in this locality, the honeyflow has ceased abruptly in the middle, or towards the end of July, and in the absence of a later flow, the young bees produced after the clover opened would have been useless. If on the other hand we had an August flow, as in some years, the story might have been different. Most of our beekeepers here use new package bees every spring, so that they are not interested in getting young bees for winter.

Dr. Miller once observed that the age at which young bees go to work is determined more by the necessities of the case than by age, as taught in orthodox bee textbooks. Probably he was right and without brood to take care of, the young bees may very probably start work in the field at a much earlier age. At any rate the plan is worth further trial in all cases where the apiarist believes that he is within three or four weeks of the close of the honeyflow and where he does not require young bees for wintering.

Hy W. Sanders,
Morris, Manitoba.

Steve Hannagan, ace in publicity.

HONEY IS GOING TO TOWN

By JOHN H. PATON

STEVE Hannagan—America's foremost press-agent—has often been complimented on doing a "Honey" of a job. He is now scheduled to do a "job" on honey.

That means that the publicist who is working for the Union Pacific Railroad, The Owens-Illinois Glass Company, The Coca-Cola Company and other large industrial corporations and manufacturers—the same man who made famous Miami Beach, Sun Valley, and the classic 500-mile automobile race at Indianapolis—is about to turn his talents and the talents of his organization to a national promotion campaign on honey.

The campaign will be, in Hannagan's words, "A national effort to tell people more about the qualities, the virtues, the sheer goodness, of honey."

Before discussing further the campaign, which will have the backing of the producers, the packers, the distributors—and, it is to be hoped, the manufacturers—of honey products, it may be well to introduce personally Steve Hannagan and some of his associates.

Steve—who is really Steven Jerome Hannagan—was born in Lafayette, Indiana, 41 years ago. He would probably be thoroughly satisfied with the following summation of his career: "He has been a newspaperman for 25 years."

As a matter of fact, that is exactly what he has been.

After selling newspapers and serving as a cub reporter on the Lafayette Morning Journal while attending high school, Hannagan became successively sports editor and city editor of that paper. These were followed by service with the Indianapolis Star, with United Press, and later as feature writer and New York columnist for Newspaper Enterprise Association and United Feature Syndicate.

In between, he was educated at Purdue University—and somehow found time to contribute to most of the national magazines.

Back in 1919 he also became director of publicity for the Indianapolis Motor Speedway, an account he still handles. After serving as vice-president of Lord & Thomas, Advertising Agency, Hannagan set up his own publicity organization in New York City—an organization which now has representation in several major cities throughout the country.

Through it all Steve has been known as the "Newspaperman's Press Agent."

His philosophy concerning his work is this. "I believe there is romance, color, news, in almost any subject in the world. Of course. I think it takes

The Hannagan organization makes news of such industrial commodities as asphalt shingles.

Miami Beach and Sun Valley rate high in the resort world, and it is likely, when you read of them that the source of the material came from the Hannagan Associates. They "put over" both places.

a trained newspaperman to ferret it out and to project it in such a pattern that it will find reception at the editor's desk. I also think it takes a certain amount of imagination—and plain hustle—both attributes of a good reporter—to bring back a good story."

Around him Steve Hannagan has gathered a group of trained newspapermen—reporters, feature writers, specialists in radio, newspictures, newsreels. His lieutenants include Larry Smits, of Michigan, grandson of a country newspaper editor, son of a minister—and recognized as one of the best reporters in America. Another is Joe Copps, a Floridian who now heads up the Hannagan Miami Beach unit—and creator of hundreds of newsreel and newspicture "stunts" featuring the famous bathing beauties.

Don't think the Hannagan record is topheavy with resort promotion, however. Among his present accounts are some of the most conservative—and most progressive—organizations in America. They include The Coca-Cola Company, Cities Service Corporation, The Asphalt Shingle and Roofing Industry, The Owens-Illinois Glass Company, The Government of Puerto Rico (U.S.A.), Insulux Glass Blocks, Union Pacific Railroad, and others.

What can he do for honey? A representative of the American Bee Journal asked him that question.

"I don't know until our reporters come back from covering the honey story," said Hannagan. "But I think we can find out some of the pertinent facts about the honey industry and make them known to all America.

"I urge that the publicity campaign contemplated by the industry be paralleled by a research program designed to project an industry advertising campaign. I believe both those are necessary.

"Frankly, the first thing we want to do is learn something about honey, and the honey industry. After we do that, we'll formulate a definite program and submit it to your advertising and promotion committee. With its assistance and approval—and that of the industry—we'll try to present honey as an interesting and vital subject to all the many mediums for the dissemination of news and information in this country."

Nice, isn't it? Even a beekeeper might enjoy Miami's sun and waves.

New York, N. Y.

HOW TO SELECT HEAVY PRODUCING QUEENS

By E. C. BESSONET

DURING the past few years considerable material has been published on the improvement of stock and variations in the performance of different stock are definitely established. Our aim should now be to further the interest in better stock and in stock judging, since we are able to make predictions concerning the capacity of a queen a few weeks after her introduction.

Early examination of colonies when queens have had a chance to establish themselves will enable the beekeeper to cull out undesirables. Should there be a preponderance of queens that fail to produce brood of high quality, it would be useless to introduce queens from the same source, as they will just repeat the performance instead of improving conditions. The colonies will become weak and further trouble will be experienced.

Let me try to describe the ear marks of good stock which are reflected in the performance of the queens. While queens may look good, it is the hidden characters that govern their performance. We realize that all queens should be well developed by providing sufficient feed and pollen and a plentiful supply of bees to nurse the cells from which they emerge. The job of assuring well fed queens is left to the breeder, as well as the selection of characters which the stock should possess.

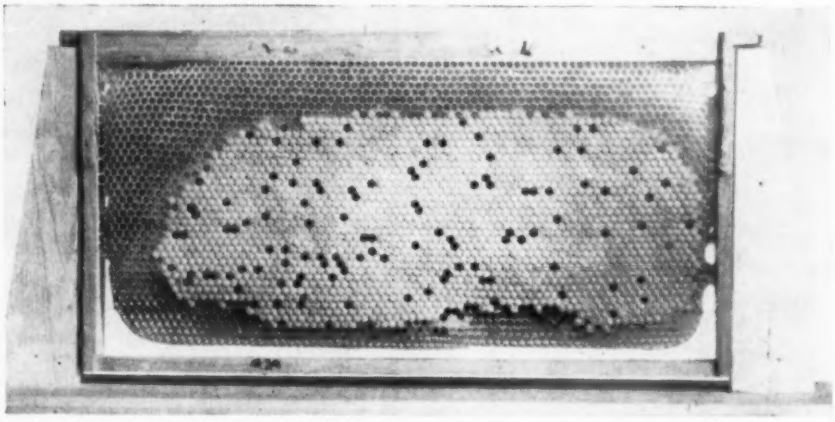
We must bear in mind that queens must not only have an ideal body type, but must be well bred for performance. There is some correlation between body type and performance, but body type alone does not produce good characters. Many large queens are of no value for producing a large population. In the past entirely too much emphasis has been placed on the size of the queen without giving serious thought to intelligent breeding, which is in reality far more important than working for size.

In scientific selection, the breeder will produce automatically the right type of body, since his process will insure this result. Give first thought to the performance of queens, and when a queen is found whose performance is satisfactory her body type is usually ideal. I advise any prospective breeder to pay little attention to body type when starting, as this consideration is of minor importance. When you have ideal brood combs, the queen's body-type solves itself. Any beekeeper can look into a strong colony and see the queen to determine the type of body she possesses and the chances are she will be the kind of queen further described in this article.

The Ideal Queen

As we glance over combs and find the queen, we see a beautiful insect in all her glory, weaving slowly over the combs, occasionally laying without much interruption, while the comb is being handled. You will see that she has a long, slightly tapering abdomen, loosely attached to a good wide thorax.

To the beekeeper who considers beekeeping an art, she is a masterpiece, and only too often the beekeeper wishes he could have more queens like her. But with man leaving too much to nature, only a few of this sort will show up in the yard. It may rightly be asked if it is possible to have a large percentage of queens of the right type. I say, yes. It takes more than nature to provide



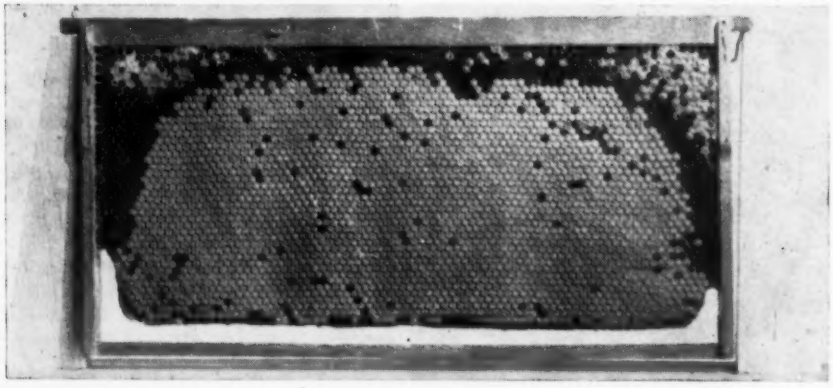


Figure 1 (below) The work of a prime queen at her best.
Figure 2 (above) A fair queen but hardly comparable to the best.

a large proportion of good queens, and this is where man's skill is challenged.

In the February and March issues of American Bee Journal, I described a scientific breeding program designed to produce results. If the breeder is able to provide the proper facilities and has the requisite knowledge to conduct a far-reaching program, he can certainly secure results. It has been my hope that the

United States Government would establish a breeding program and that the beekeeper would make proper demands for such work to be done.

Those who entertain hopes of buying disease resistant bees must wait until the Government can supply the stock. It is true that some of it has been released but this solves only one problem and leaves the major ones to the beekeeper. He lacks the proper facilities to perpetuate the strain or to effect further improvements. We recognize the difficulties in checking resistant stock which must be done in a well balanced program. Characters are easily lost through matings that may affect future generations to the point where resistance disappears.

The present stock of resistant bees lacks many characters vital in good performance. The task of keeping resistancy intact and incorporating other good qualities is more than any ordinary beekeeper can hope to do, so we realize the part the research laboratories must play in developing and providing stock suitable for the use of breeders.

Queens from resistant stock vary widely in markings and few buyers want queens that are not uniform. Considerable time will be necessary to reconcile color and other ideal characters in these bees.

Improvements are not made over night or in a year. It is the accumulation of effort over many years that counts. Our knowledge of breeding expands as we advance with the work and discover the various reactions to our manipulations. The behavior of characters in breeding often confuses us and frequently the ideals we have tried to obtain fail to develop.

I am now sorry that I could not include resistance to American Foulbrood in my own breeding program. There is a possibility that by checking carefully, even the bees we do have might show signs of resistance, and through selection all the characters we wish can be maintained and resistance developed too.

Brood Types and Population

Cale effectively discussed brood types in a recent article in the Journal. I want further to emphasize the points in question so a better understanding of brood types and its effect on population will be obtained. The judging of stock is based on the ability of the queen to produce brood of the type shown in Fig. 1, great uniformity of laying. Viability of eggs and larvae is of vital importance also in the development of large populations. However, brood type will indicate the capacity of the queen. As only a few weeks are required to determine the performance of queens, I advocate checking colonies to judge the work of the queens and any queen failing to meet the desired requirement should be replaced. The number of queens found capable of producing ideal brood determines the value of the stock. I would recommend changing the stock when the average performance is below the ideal.

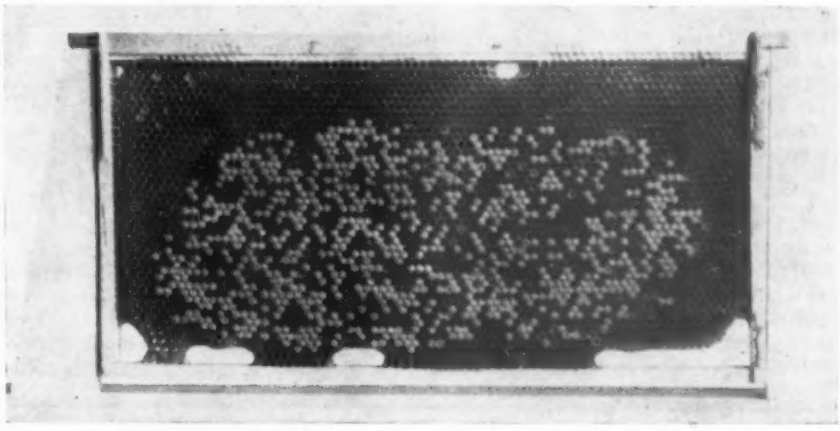


Figure 3. Brood like this produces bees too slowly and the queen is of little value from the standpoint of honey production.

Brood of the type shown in Fig 2 is considered good, but it does not compare favorably with that in Fig. 1. There will be considerable difference in the ultimate population between colonies having brood like Fig. 1 and those having brood like Fig. 2. The queen in Fig. 2 is slightly inferior to Fig 1. The results will, of course, depend on the population at the start, but conditions being equal, colonies of brood like Fig. 1 will lead in production.

The comb shown in Fig. 3 tells a story in that the type of brood gives us an idea of what to expect in the way of population and honey. Any hope of developing a normal colony with a queen producing brood like this is lost. Bees can be added to these colonies, but such colonies prove worthless and unproductive, regardless of what is done with them. Ideal characters are lacking in queens with this type of brood. The queen may be large and of normal appearance, but the ideal characters we are striving for are not there and the performance is not up to expectations. Rigid culling is recommended and stock from another source should be introduced.

With a little experience any beekeeper can learn the basic fundamentals of stock judging and by trying a few queens from different sources, he can soon have uniformly productive stock. The best policy is to buy about six queens from a number of breeders in whom you have confidence and by close observation of their performance, improvements can be made and larger crops produced. This policy will pay dividends after you have found a dependable source of supply.

Selecting breeding queens on the basis of individual colony capacity is not enough, as no records are available to show the average capacity of the progeny. This phase of selection has already been covered in my previous articles.

The best producers from a known group of sister queens should be selected for breeding. Selecting the best queen from the best group is only the first step in stock selection, however, as the queens chosen must be tested to determine whether their pregeny inherit the characters of the mother. We should not overlook the effect of the mating of the mother which will reflect either favorably or unfavorably on the daughters. This point must be emphasized.

If a breeder selects the best producer in his yard as a breeder he may find out that he has failed. If such a queen is not representative of a group of sisters, the chances are she will not produce prolific daughters. On the other hand, if the queen selected does represent the general characters of her sisters, she may be a good breeder, providing the drone with which she has mated was good too. The only way to determine the value of any queen, is by testing the progeny.

Let us remember that Mendel specifically recommended the testing of progeny to find good breeding stock and we must realize that bees come under this rule. This method applies to all breeding where mating is uncontrolled.

ANISE HYSSOP WONDER HONEY PLANT

By FRANK C. PELLETT

IN the pioneer period of Iowa history there lived in Pottawattamie County a grand old man who was a beekeeper and horticulturist. He left behind him a record of achievement which insures that he will be remembered long after most men of his time are forgotten.

H. A. Terry was a pioneer in plant breeding and originated many new varieties of peonies at a time when there was little appreciation of his work. Now, however, lovers of the peony cherish his memory and many of his varieties are still in cultivation. Terry more than any other man of his time also originated more varieties of plums which are still planted in present day orchards.

Our interest, however, has to do with his beekeeping rather than his fruit and flower growing. The writer's attention was first called to a very desirable native plant through reading an article by H. A. Terry which appeared in the Beekeepers Journal in March, 1872. Terry was no careless observer and when he stated that in his opinion an acre of anise hyssop well established would be ample pasturage for 100 colonies of bees, it demanded attention. He said that it produces honey in the greatest abundance which possesses in slight degree the same fragrance as the plant and renders it exceedingly pleasant to the taste.

Coming from a man whose work has stood the test of time and who is now recognized as having contributed substantially to pioneer plant breeding the statement convinced us that midwestern beemen have overlooked one of the finest sources of native bee pasture.

Immediately we sought to secure plants for the American Bee Journal honey plant test garden. The books state that fragrant giant hyssop or anise hyssop, **(Agastache anethiodera)** is found from Lake Superior and Manitoba to Nebraska and westward. When Terry lived in western Iowa it was so common that his bees harvested fine crops of honey but when we sought to find it no plants were to be found. Apparently it had disappeared completely from the region along with the Indian and the bison with which it had been associated.

A search of the catalogues failed to reveal a single nursery which offered it and none of the plant hunters with whom we were in touch remembered having seen it. I had seen the plant in western Canada in 1925 when the beemen all the way from Winnipeg to Edmonton were getting crops of spicy honey from it in the woodland borders of the newly settled bush country. Letters to friends in that area brought replies which indicated that it has since disappeared from many neighborhoods there. Perhaps the settlers' livestock found the fragrant foliage so attractive that it has been destroyed by grazing animals.

Months passed before we could find the plant until finally a friend located it 180 miles north of Winnipeg. Twelve plants were dug for us but first they must go to the Canadian inspection service for examination to permit their export and from there they were sent for further examination to our own Department of Agriculture at Washington to secure permission for import. By the time all these journeys were completed and the plants arrived at Atlantic, Iowa, some were dead and others in weakened condition. It was late spring but a few of them thrived and the seed was carefully saved for the purpose of making increase enough to give the bees a chance to see what they would do with it.

It seeds freely but the seed is very fine and must be kept moist during germination and until the young plants are well rooted. Our first planting did rather poorly. The seed bed was well prepared and the seed sown on top of the ground leaving the rain to cover it. Frequent periods of very dry weather resulted in a poor stand.

Our second attempt was much more successful. This time a good seed bed was prepared as before but after the seed had been sown we scattered a very light coating of straw over it to shade the germinating seed from the sun and to prevent the soil from drying out so quickly. This time the result was very pleasing. Thousands of young plants soon appeared and although there were times when there was serious lack of rainfall, they continued to grow until we had a wonderful stand.

Among the hundreds of plants which have been tried in our test gardens there have been few which proved so attractive to the bees or which brought so many butterflies and other insects. Terry wrote more than sixty years ago that anise hyssop bloomed from early June until frost and our test plot verified all that he claimed for it. Bees began working on the flowers in June and there was still a scattering of flowers which the bees visited freely in early November, a period of about five months of continuous activity.

It seems strange that our herb gardeners should have so completely

Flower clusters of anise hyssop.

overlooked this plant. The old world hyssop which has been cultivated for centuries has been brought to American gardens but this one which was so much loved by the Indians has been permitted to disappear almost completely from its native region.

From the leaves of anise hyssop the Indians made a beverage similar to tea although the taste is entirely different. We have made such a drink from it on several occasions and find that when properly made it is very pleasing. Because of their fragrance the Indians used the leaves also in seasoning other food much as our mothers used the garden sage. A remedy for colds was also prepared from this plant by the red men. It seems strange, indeed, that a plant with so many attractions should be permitted to vanish so completely.

Referring again to its value to the bees, our plots are too small to permit any accurate estimate of its value. The bees do work it so vigorously that one cannot doubt that they are getting a substantial harvest. The long period of its bloom and the fragrance of its flowers and leaves certainly offer encouragement to plant more of it. Terry who had opportunity to observe it when it was still abundant placed it very high as a source of nectar. If his estimate was correct it must be equal to sweet clover as a source of honey and superior to most of the honey plants with which we are familiar. Terry stated that his bees worked it stronger than any other wild plant in Iowa in pioneer days.

An old plant of anise hyssop may have more than 100 flower clusters blooming at one time.

Anise hyssop in the honey plant test gardens.

Although he regarded it as worthy a place in any garden, the gardeners failed to appreciate it until now. Certainly in view of the great interest in herb gardening that has so recently been revived there will be a demand for this finest of plants from the red man's herb garden. A plant that blooms for months and which at its best may have more than 100 flower clusters at one time as anise hyssop does, is certainly worthy of more attention than it has received.

♦

DISCUSSION ON INTERSTATE SHIPMENT OF BEES

1. Interstate shipment of bees without combs.
2. Interstate shipment of bees with combs.
3. Interstate shipment of all bees after inspection.

Mr. Ruggles said that the main object of laws regulating the shipment of bees was to help the beekeeper and not particularly to help the inspector. Any arrangement whereby beekeepers can move bees from one state to another more easily without endangering the rights of others or without running the risk of increasing disease should be adopted. Some laws now operating in some of the states are not only un-American but are actually trade barriers and prevent movement of bees from one state to another even when no danger is involved.

Mr. Ruggles said that by careful checking of bees it would soon be shown whether the inspection had been carefully done. Inspection certificates should, of course, always accompany bees regardless of what shape they are in when moved. Modern laws recognize inspection certificates of other states but naturally the states furnishing the certificates should have recognized inspection service.

Mr. Ruggles recommended staying away from federal inspection as state inspectors could take care of matters much better as they were familiar with the problems of each state.

Thomas Atchison of Alabama reported that out of 40,000 colonies inspected in Alabama by him only fourteen colonies were infected and these were, of course, quickly destroyed. Mr. Atchison stated that the amount of disease in Alabama was negligible.

Mr. Bessonet mentioned that there was no disease in Louisiana worth mentioning and what little there was was confined to a very small area.

A. G. Ruggles, State Entomologist,
St. Paul, Minn.

OBSERVATIONS ON NECTAR SECRETION

By GEO. H. VANSELL,

Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture,

Davis, California.[1]

ALL commercial beekeeping is dependent on nectar from plants; therefore, it is strange that so little definite information on the phenomenon of secretion is available. Numerus beekeepers have recorded data showing that honey production varies from day to day and from year to year in the same location, and they conclude that nectar secretion must vary. The reasons for this variation are obscure, since the general appearance of the plants and the amount of available blossoms may be at a maximum at a time when the smallest honey crop is harvested. For example, fields of alfalfa may be blue with blossoms, the weather seem ideal, and the bees in satisfactory condition; yet no honey comes. Again, fireweed may appear in its prime while the bees are virtually starving. Some sort of a cyclic change in nature results in a good crop of this honey in only one year out of three or even four. A similar cycle occurs in sage honey along the coast of southern California.

Bonnier, a Frenchman of a previous generation, did noteworthy work on the structure of nectaries, but his work has not been of much help in practical honey production. Ruth Beutler, in Germany, has recently published observations which show that nectars from different plants are dissimilar in kind and concentration of sugar. O. W. Park, in Iowa,, has studied the nectars secreted in gladiolus plants. W. S. Cook, in the same state, has discussed the structure of nectaries for certain plants. Their work, as well as that of many others, has contributed liberally to our knowledge, but still we do not know when or where the nectar will appear in sufficient quantity for profitable honey storage. We have no established rules to guide us.

The factors involved are evidently numerous, for even under irrigation a field of alfalfa or an orange orchard cannot be relied upon. Each year has about the same length of season, with abundant sunshine and other characteristics suitable for field work by the bees. Only after the blossoms are on the plants does it become possible to predict results by watching the activity of the bees. All the beeman can do at present is to have his bees in shape for a flow; then if the nectar comes a crop results. This situation is not satisfactory, because moving bees to a location costs money.

Recent examination of western nectars with a sugar refractometer has revealed a considerable difference in sugar content between different species and between varieties of the same species. Varieties of both plums and pears show such differences that bees avoid some by giving preference to others. Pollination that is dependent upon insects may also be affected by these preferences. Who knows that there are not varieties of the major honey-plant species which surpass others in nectar secretion? If any variety is superior in this respect and equal in others, it would be economy to grow that superior one.

Since detailed observations have been made on certain varieties of plums, the data are included in Table 1. All the trees were in one orchard, at Davis, California, so that differences in soil, water supply, humidity, and management are not factors in the observed variations. Other varieties of plums in other places have yielded nectar far richer than any in this table.

Table 1. Sugar concentration of nectar from several varieties of plum at Davis, California, on the morning of March 17, 1935.

Variety of plum (1)	Average Sugar concentration	Variety of plum	Average Sugar concentration
	Per cent		Per cent
Maynard	10.1	Shiro	17.8
Gee Whiz	13.5	Etta	19.0
Eldorado	14.9	First	23.3
Miss Edith	16.1	Milton (2)	28.4

(1) Kelsey, Better than Gold, and Kingdom Come varieties and insufficient nectar for hand collection, and bees were entirely absent.

(2) Outstanding variety as to number of bee visitors.

Likewise certain vetch nectars collected at Corvallis, Oregon, are of interest. (Table 2.) All but the last two were found within a few rods of each other. Honeybees were observed to visit only the blossoms on the hairy and purple vetches, neither of which were producing extra-floral nectar. When vetch extra-floral nectar was produced, the honeybees confined their activities to this source almost entirely. The blossom nectars of all except the hairy vetch were collected by pipette.

The nectar situation in Alca cotton (California) appears to be similar to that in those vetches (Oregon) that produce floral and extra-floral nectar, as, for example, Hungarian vetch. In cotton, in September 1938, the sugar concentration of floral nectar averaged 21.5 and that of extra-floral nectar 41.9 per cent. Bees are reported practically to ignore the cotton blossoms during a normal cotton honeyflow.

The sugar concentration of nectar in any plant varies with the humidity and the movement of the surrounding air. Open-type blossoms, such as those of apricot, are subject to greater and more rapid variation than those of a closed type, such as manzanita. Therefore, no definite concentration can be said to exist for an extended period. The average concentration, however, in one kind of plant is different from that in another under the same conditions. Data on the average sugar concentrations obtained for a number of plants during several years are presented in Table 3.

The sugar content of the nectar of some plants is observed to be only a fraction of that found in others. This indicates that certain plants could not be major honey sources except when extremely abundant and isolated from richer sources. Where two species or varieties are in blossom, bees tend to ignore the less productive one. For example, Cleome plants are not attractive in the presence of alfalfa when the latter is secreting; however, Cleome may secrete when alfalfa does not, and then the bees will visit it in preference to

(1) A contribution from the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, in cooperation with the Univeristy of California.

Table 2. Sugar concentration of nectar from blossom and from extrafloral nectaries of several species of vetch, Oregon (1), June 1937

Species of vetch and source of nectar	Average sugar concentration	Species of vetch and source of nectar	Average sugar concentration
	Per cent		Per cent
Common:		Melanops:	
Blossom	22.6	Blossom	22.6
Stipular	56.5	Stipular	52.1
Hairy, blossom	44.0	Purple, blossom	28.0
Hungarian		Wild, blossom	23.1
Blossom	25.2		
Stipular	47.7		

(1) These data and all other for Oregon were obtained cooperatively with the Oregon Agricultural Experiment Station.

Table 3. Average sugar concentrations of the nectars of some California and Oregon plants

Plants	Average (1) Sugar Concentration	Plants	Average (1) Sugar Concentration
	Per cent		Per cent
Alfalfa (2)	41.1	Hoarhound	48.3
Almond	35-50	Hollyhock	37.0
Apple	45-55	Incense cedar (honeydew)	36.3
Apricot	5-25	Jackass clover	45.3
Aster (Aster spinosus)	36.2	Linden	33.6
Avocado	15.2	Locoweed	16-60
Bachelor button	52.5	Madrone	15.0
Bird's-foot trefoil (Lotus glaber)	52.0	Manzanita	16-50
Blackberry	27-37	Maple	42-50
Black locust	63.2	Milkweed	37.2
Bluecurls	27.1	Monkey plant	32.0
Buckeye	33-51	Mustard	44-51
Buckwheat	37-59	Orange	10-30
Cantaloup	46.7	Oregon grape	45.0
Castor bean	47.8	Peach and nectarine	16-40
Catnip	28.7	Pear	4-30
Cherry, sour	15-40	Pentstemon	37.3
Cherry, sweet	50-60	Privet	39.2
Chickweed	50.0	Red filaree	65.0
Cleome, Rocky Mountain and yellow	11-22	Sage	33-48
Clovers	33-60	Salal	50.5
Cotoneaster (Cotoneaster harroviana)	24.5	Sainfoin	55.4
Dandelion	51.2	Snowberry	28.6
Eucalyptus	14-30	Spikeweed	39.9
Everlasting	34.0	Sunflowers	31-46
Fall dandelion	40-50	Tamarix	38.8
Fenugreek	32.9	Thistles	35-50
Figwort	19.6	Tobaccos	19-26
Fireweed	35-50	Toyon	44.8
Flax	49.5	Tulip poplar	19.6
Flowering currant	18.9	Turkeymullein	19.6
		Vervain	48.0
		Willows	40-70

(1) Two figures indicate a range between varieties or species.
(2) Excluding Imperial Valley data.

alfalfa. This occurred near Ontario, Oregon, in July 1938.

That bees shift suddenly from one plant to another has often been observed. In Tulare County, California, on April 28, 1938, a shift from mustard to orange occurred. During the early morning hours bees were absent from orange blossoms but numerous on mustard; the average sugar concentrations of the respec- afternoon had an average sugar content of 28 per cent. The bees on orange seemed to be scouting over the blossoms, selecting those with the richest nectar, for at 4 p. m. the average sugar concentration of nectar the orange blossoms, which at mid- tive nectars at the time were 19.7 and 43.0 per cent. As the day advanced mustard nectar tended to become exhausted, and the evaporation of water from the trees resulted in an almost complete shift of bees to taken from sacs of bees was 40.9 per cent. At 3 p. m. nectar from 52 blossoms on protected and exposed parts of the trees ranged from 16 to 43.2 per cent in sugar content. The day, which followed a showery one, was fairly humid, warm (76°F. maximum), partly clouded, and practically calm.

There is thus a competition among plants for visitation by bees for nectar. Both quality, that is, sugar concentration, and quantity are important.

The same situation apparently holds for pollen, since a plant that produces much more pollen than another may be neglected. This was the case with cotton and bluecurls late in September 1938 in the San Joaquin Valley of California. Cotton had a large quantity of pollen per blossom, and it appeared to be easily accessible; yet bluecurls was worked for its limited supply of green pollen, and not one bee could be found collecting the white cotton pollen. The grains of cotton pollen are very large, with needle-sharp spines, similar to the pollen of the cultivated hollyhock. In a like manner sunflower blossoms were being almost neglected, the bees preferring spikeweed pollen. No reason for this selection is now apparent. Recent analyses in California (1) have shown that certain pollens are far richer than others in carotene, proteins, and fats.

(1) Unpublished data by F. E. Todd and Ormond Bretherick.

♦

SAINFOIN

The article on sainfoin by Frank C. Pellett in the August number of the American Bee Journal was particularly interesting to me because I used to grow it when farming in southeast Kent, England, many years ago. It grew particularly well on the calcareous soil, we used to think on account of the high percentage of lime. However, according to Dr. Stebler, of Zurich, a high percentage of lime is not necessary so long as the physical condition of the sub-soil is suitable. The roots descend very deeply into the ground and on this account the plant can withstand drought.

The chief drawback from the farmer's point of view is that after land has grown sainfoin for a number of years, it must be given a long rest from that particular crop, some say, as long a rest as the age of the crop, so that if the sainfoin has been growing seven years, an interval of seven years must elapse before it is sown again on the same ground. The drawback from the beekeeper's point of view is that it must be cut for hay when in, or a little before, full bloom.

The honey is delicious. A characteristic feature of sections produced from this crop is the pale yellow color of the cappings which gives them rather a rich appearance.

If seed is harvested, the number of years during which the crop will continue to be a profitable one will be materially lessened. It makes a most valuable fodder, and hay in the stack brings the highest market price. A field of sainfoin in full bloom is a delight to both sight and scent.

B. Blackbourn.

Dr. Millen takes bees to India.

FROM IOWA TO INDIA

By MARIE E. VAN NEST

TO provide employment for native Christians, Dr. Theodore W. Millen, Sioux City, Iowa, shipped to Allahabad, India, three queen bees and nine combs of brood, all progeny of one queen bee which was bred at Iowa State College to live under conditions in India.

These bees journeyed the 13,000 miles in a hive especially constructed by Dr. Millen. Only the three queens completed the two-month voyage for in three weeks after their departure from Sioux City the others died and new progeny appeared on the combs.

The shipment of the bees caused Dr. Millen no little concern. Railway Express forwarded them from Sioux City to San Francisco. He felt that he could trust their trained workmen not to open the hive in which there was sufficient food but he feared that state inspectors enforcing a quarantine might open it and carelessly allow the three queens to enter the same compartment where they would fight until only one survived.

Dr. Miller under appointment from the Board of Foreign Missions of the Presbyterian Church to supervise the teaching of animal husbandry and veterinary medicine at Allahabad Agricultural Institute, sailed in early September on the President Cleveland. Because the President liners do not carry live freight, Railway Express was forced to consign the hive to a British boat for the Pacific voyage. War conditions forced Mr. Millen to remain in ignorance of everything concerning this boat except a tentative sailing date of August 24 from San Francisco. Its name, its route, its ports-of-call and the date of its arrival in Bombay were veiled in the deepest secrecy.

If disaster befell the boat, Dr. Millen's loss will be keen for he has worked for years developing this particular strain of bees and the nine specially-bred chickens which accompanied them on their long dangerous voyage.

When he was teaching in Woodstock at Mussorie, a school for the children of Americans living in India, he accompanied pupils from Allahabad home from vacation and there he became acquainted with the work which the Institute is doing to raise the standard of living among India's lower castes.

Since honey is one of the products which cannot be polluted and the outcastes are allowed to gather wild honey to sell, he could foresee the boon a well-developed apiary would be in giving employment to native Christians, many of whom are low caste.

When he returned to the States he immediately enrolled at Iowa State College where he studied three years obtaining both his Master of Science and his Doctor of Veterinary Medicine degrees. For the past two years he has done research for Allied Laboratories in Sioux City while awaiting his appointment to return to India.

During all five years he has worked carefully and constantly to secure the very best strain of bees and the best breed of chickens possible for establishing productive industries in India.

A freighter following the long route around Africa this summer carried supplies for Dr. Millen's apiary—among them a honey extractor and a bee comb foundation mill which he believes is the first one to be shipped to India for the production of standard foundation. He personally directed its manufacture and hopes that it soon will be providing employment for several Indian Christians and will lay the foundation of an industry which will enrich the lives of many families living in the province.

—♦—

CUT COMB FOR A DIME

One of the prettiest packs of cut comb honey we have seen; sent by A. V. Small, of Kansas. The picture is some larger than the actual pack and of course it is hard to see the bright color and the snap and appeal of the honey. It is small enough for a single meal for the average family and small enough to pack to retail for a dime, with profit all along the line. We stick so close to the cans and jars we have always used, that we become fossilized and fail to keep in the swim. As a result, we become dead certain that there is no profit in honey; never will be. (Oh shucks!)

MUNNY GOES FISHING

SPEAKING of beekeepers' vacations (L. C. Dadant "A Beekeeper's Vacation," November) here is a good example of what many of us like to do. J. A. Munro, (North Dakota) got tempered up for his trek to Omaha, somewhere in the wilds of Ontario (that's our guess, anyway). Of course, being a good fisherman, he could not be expected to tell just where he caught these speckled beauties. That's for you to find out. Yet, we'll bet a honey doughnut against a honey cookie, it **was** a vacation.

BEES FROM THE HONEY HOUSE

Somewhere in Ohio, Grout and Bob got this hive with its load of bees—bees that had gathered in the honey house at windows and were later run in with other similar lots in the convenient hive outside. It is common practice. Often such hives are started as mere nuclei and finally swell to immense populations and many bees that would be lost are saved. In most central plants today, there are no near bee yards. Usually the building is in town and robbing is at a minimum. Loads of honey may be brought in safely and many other jobs that would be hampered by the presence of an apiary are done more efficiently.

NEW USE FOR APPLE BASKET

I. C. Evans (Decatur, Illinois) sends this basket full of comb. Bees do the funniest things. As Lew Lehr might say, "They is the cwaziest cweturs." They desecrate bedrooms, drive cooks from kitchens, shoo congregations from church, get in the favorite apple tree, and now crawl in the apple basket. Some of these open air dwellers actually live all winter, in even the worst winters! Something in that to think about. And, too, some of them, with worlds of room, actually swarm. We have seen bees throw swarms from attic cupboards so big several colonies could live in them, side by side and never become crowded. Must be crowding means a condition within the combs and within the colony itself.

BRIGHT, MODERN PACKAGES

"Land O' Lakes" has an enticing euphony and the jars have an attraction of their own. This subject of packaging is getting scientific. There is no way to determine what the buyer wants except by test. Often two packages, placed side by side on the same store shelf, will show marked diffeerences in consumer acceptance; often, unexplained differences. Frequently the consumer will choose the package the beekeeper thinks poor. Why, no one knows. Yet often beekeepers buy containers just because they like them and place on them labels that suit some trick of their fancy. Bee beards frequent beekeepers' labels, and bee yards, or swarms of bees. But how often does either jar or its label jump right into high favor with the one whom we hope will finally eat the honey? Much room for improvement.

THIS AND THAT • • FROM HERE AND THERE

ALL WRAPPED UP IN CHRISTMAS

Giving his jars of honey "gift glamor," the honeyman enters fully into the Christmas picture and is able by this means to compete sans handicap with the finest of Christmas presents for public favor. No need for the honey producer and honey retailer to step aside or stand aloof as he views with disdain the terrific circulation of hard cash, and none of it coming his way, at the merriest merchandising season of the year.

Now his honeys can be part and parcel (especially the latter) of the Jolliest Christmas, floating squarely in the mid-stream of Yuletide selling, all dressed-up "to go places." Jars or bottles of fine flavored nectar of the bees should be most gaily packaged, and dolled-up with ribbons and the colors of Christmas, to participate to the fullest extent in the blythe and happy season.

Of course, the question may be asked at the outset: "Do you want to develop Christmas business? or don't you 'give a wrap' about it?" The latter method of not wrapping the honey-jar in glamor is the surest way of not doing any Christmas business at all,—for then the package has no "umph" (new word for "It").

Paper, gauze, cellophane, tinsel, sprigs of holly, and doo-dads of every Christmas-sy distinction add immensely to the appetizing quality of the present. The Christmas gift has to be appetizing from with out as well as within. It must **resemble** a present. If so, it has Nine Points of Allure . . . an irresistible quality that makes the customers reach for it in a big way.

Appropriate and artistic packaging, therefore, is vital to the honey seller. Moreover, larger-than-necessary boxes for the bottles of honey serve a super purpose, since the larger the box the more decorations it can hold without overcrowding. A branch of pine or evergreen like a bit of the Christmas tree the packaged honey may adorn, or a bit of mistletoe atop the parcel and tied with a fancy bow, adds immeasurably to the flair and fanfare of the Christmas presents.

Brightest bit on the Christmas table of glamourous gifts, upon the Christmas tree, or in the hands of a friend, may be the be-ribboned jar of honey. Such parceling provides maximum Christmas excitement and makes the "sweetest sweet" the most welcome, the finest and most healthful present that may pass from friend to friend, or relative to relative, during the gift period of the year.

Gay wrappings are much more than half the fun of holiday parcels, —so if the holidayed honey has that swell look that makes the glad recipient exclaim: "Why, it's too pretty to open," then the honeyman has what it takes for doing a merry merchandising business this Yuletide.

C. M. Litteljohn,
Seattle, Wash.

♦

SEVEN STATES SHIP THREE HUNDRED EIGHTY-TWO TONS OF BEES

During the normal shipping season this year more than 382 tons of live bees were shipped by express from the seven states east of the Mississippi to the north. Canada was the biggest market. The express traffic in package bees has shown a marked upward trend in recent years, and during the past season increased 30 per cent over the same period in 1939.

Alabama and Mississippi were at the top of the seven leading bee states in the number of forwarding points. Letchahatchie, Alabama, a town of only 500 people, was in the lead with over 11,000 cages of bees shipped. Helena, Georgia was second. The express transportation charges on bees shipped north exceeded $50,000.

City Trade News Service,
New York.

♦

AMERICAN HONEY IN CANADA

The Department of Commerce of the United States has recently released a report by Joseph I. Touchette, American Consul in Montreal, entitled "Market in Eastern Canada for American Honey."

After a general report of the increasing importance of honey production in Canada with detail in figures of the past and present bee population, number of beekeepers, and honey production for the Dominion, the report concentrates on evaluation of Canadian exports and imports.

Until the western provinces began honey production commercially, Canada was able to consume most of the honey it produced, the western provinces taking the surplus of the eastern. Since then, Canadian exports have steadily risen, being one and one-third million pounds in 1926 and nearly five million in 1939.

In November of 1939 import restrictions on imports of honey were lifted in Britain (Canada's chief customer) and due to a very heavy demand from this source, not only volume of exports, but also prices rose rapidly during last winter. In fact during the first four months of 1940 over six and one-half million pounds of honey were exported, or much more than the total for the entire year of 1939.

It was reported that prices on the Montreal market were as low as five cents per pound in September of 1939 and had reached a total of as much as 11 cents in some cases by August 1940.

The small carryover from 1938 into 1939, combined with the light 1939 crop, probably caused this extreme rise in price and allowed the importation of U. S. honeys, over a million pounds being imported from this source during the first four months of 1940. American honey was being laid down in Montreal at from 8½ to 9½ cents a pound, to replace the domestic crop which had already been docketed for British orders.

For our readers' information, the duty on U. S. honey entering Canada is 1½ cents a pound. There is an added 11 per cent for the difference in exchange value of the American and Canadian dollar, plus a war revenue tax of 10 per cent. In other words honey bought in the U. S. for Canada at a price of 5 cents had to have added a freight of at least one cent making the base price 6 cents. Adding 1½ cent duty, and ¾ cent each for exchange and war tax, U. S.

honeys cost the Canadian buyer in the neighborhood of 9 cents.

It is apparent, therefore, that U. S. honeys can hardly expect to share the Canadian markets except in rare circumstances like the present ones, when Canadian honey is unable to fill the demands put upon it.

The report concludes with a resume of Quebec honey marketing which is done largely through the Co-operative Federee of Quebec to which about 70 per cent of Quebec farmers belong. A copy of the Canadian honey act is also included in the report which takes up 25 legal size mimeograph pages.

♦

UTAH LOSSES

Losses of bees in Utah this year have not been great although losses during recent years have been severe. In 1939 estimates ranged from $200,000 to more than $300,000. Co-operation has been set up between the state experiment station and the Inter-mountain States Bee Culture Laboratory at Laramie to determine the real cause of the losses. Dr. A. P. Sturtevant, of the laboratory and G. H. Vansell and J. D. Hitchcock have been examining apiaries and consulting with beekeepers. Reported losses were laid to grasshopper bait, sugar beet web-worm spray, tomato fruitworm dusting, smelter smoke, mosquito control, orchard and garden spraying, loco and other poisonous plants, or possibly some new and yet unrecognized bee disease.

Repeated tests with various grasshopper bait combinations, spread near a large apiary in Weber County, during August and into mid-September in 1939, indicated that bees seldom were attracted to the baits during that period. Similar tests in Cache County in June and July, 1940, attracted few honeybees. Observations in tomato fields indicate that bees are not particularly drawn to the blossoms. Tomato growers, however, have been urged to use care in dusting, to keep the dust on the plants and prevent drifting and also to keep fields clear of weeds in blossom at dusting time.

The importance of the beekeeping industry in Utah is greater than most people realize. Utah ranks eighteenth among the states in honey production but the value of the bees as pollinators each season far exceeds the value of the honey and wax produced.

During the 1939 investigation, A. G. Pledger, president of the state association, set aside a large apiary at Slaterville for detailed experimental studies. Others were also active in cooperation, so large numbers of beekeepers have been contacted throughout the state and the history of their losses obtained. Continued cooperative work should lead to a solution.

Glen Perrins,
Ogden, Utah.

♦

USED CANS POOR ECONOMY

Many beekeepers put honey into used containers believing they are saving money. I am firmly convinced that second hand tin is expensive at any price. Tin these days is made very light and does well to stand up under one use. Used tin is never in good condition. The beekeeper usually has to take less money for his honey because it will not sell as well and he has to apologize for its appearance.

I know an instance when a merchant woudn't buy honey put up in used cans because it did not look well. He would not sell anything he could not use himself.

Store your honey in a dry place. If there is any chance of rust, wipe cans with cloth saturated with unsalted lard, linseed oil or sewing machine oil, to keep them in good condition.

Ethel Strayer,
St. Paul, Nebraska.

♦

BOOK ON ENEMIES OF BEES

"Les Insectes Ennemis des Abeilles" is the title of a French work of 180 pages, with numerous illustrations, by Dr. C. Toumanoff, Chief of the Division of Entomology of the Pasteur Institute located at Haigon, Indo-China.

In this book Dr. Toumanoff gives an account of the different insects and animals which infect apiaries or attack bees in the field. The first part of the book is devoted to different insects more or less dangerous to bees: wasps, ants, wax moths, two-winged flies, beetles, dragon flies, mantises, etc The second part discusses spiders, mammals, birds and reptiles.

The book covers bee enemies in Indo-China, western Europe, and some of the bee enemies in North America. While a few of his references may not always be of the most recent, Dr. Toumanoff has a book which should be of keen interest to anyone making a study of bees and beekeeping, and a book which deserves high praise.

The book is paper bound and may be obtained for about $2.00. The American Bee Journal is making effort to obtain a few copies for those who may be interested.

♦

NEW VITAMIN BIOTIN, A PRIMARY SOURCE OF FOOD

The AP, September 13, say that the American Chemical Society Convention in Detroit was told of a new vitamin, biotin, the "most potent and powerful physiological substance ever discovered." Biotin is a part of the vitamin B "complex," which means that it is vital for man. It is so powerful that it is measured in thousandths of a millionth of a gram. Without it soil germs, the azotobacter, which fix nitrogen for plant growth, are unable to work. This fixation is the basis for all plant life, and therefore biotin is probably a primary source of all the food on earth.

♦

UNCAPPING

In all of the bee supply catalogs where they show a picture of someone using a capping knife they show them using an up stroke and the beginner gets the idea that this is what he should do. Probably the man that makes the cuts never uncapped any honey and so he doesn't think much about this. Well if you use a down stroke you don't have to lift the honey and you can see much better just what you are doing, and if you tip the comb forward a little the cappings fall clear of the combs.

Irving Kenyon,
Syracuse, N. Y.

♦

SUPERSEDURE

Did you ever try swapping colonies to stop supersedure in package bees? When you find colonies which are being produced from packages that are attempting supersedure, swap these colonies with others that have not made such an attempt and see how quickly the colonies with cells stop the supersedure attempt. Remove the cells at the time of swapping.

Lee Gibble,
Penville, Indiana.

AMERICAN HONEY INSTITUTE

A young lieutenant in the World War wrote home to his mother saying, "Tomorrow we move toward the front, but we have no fear, our captain is a fine soldier and he and I fit like ham and eggs."

So we here at the office of the American Honey Institute fit like ham and eggs, but alas, our captain has gone on a long journey and we must go to battle without her so if the news notes are not up to par, just blame it to the eggs that are inadequate without the ham.

♦

Mrs. Harriett M. Grace left this week for a visit to the honey folk of California, Oregon, Idaho and Florida. A long journey it seems to those of us who are left behind but when we so expressed ourselves she smiled negatively. Then we realized that a cross country trip wouldn't seem long to one who had crossed the Atlantic some eight or ten times and traveled in both the old world and the new.

Though we dislike the idea of assuming the responsibilities of the office for three weeks or more, we really do welcome this opportunity of sending our director out to meet the beekeepers of this broad land. Mrs. Grace has had very unusual advantages for education and travel both at home and abroad, so we welcome these opportunities for her to meet the people of the honey industry for we well know that wherever she goes she wins new friends for the industry. Friendship makes for cooperation and cooperation for success in any business.

♦

Now that election is over we can all settle down and give our assistance to the government in providing an adequate national defense. What is "National defense?" Is it airplanes, battleships and munitions or is it more than that? The best asset of any nation is perfect manhood and womanhood, perfect physique plus sound minds and high spiritual values. These can be encouraged and improved by correct nutrition. So let's give more attention to our diets these days. You men, who eat lunch out can learn to choose more wisely. Each day I sit on the balcony of a large cafeteria and eat my lunch. Here I can look down on the plates of hundreds of workers. I am sometimes shocked at what foods some select, expecting from it to renew broken down tissues and furnish energy for the afternoon's work.

One lunch I saw yesterday was scalloped macaroni, hard rolls, cake and black coffee. Compare this to broiled liver, buttered carrots, baked potato, glass of milk and a fruit cup. The first man provided only for his energy requirements. The second man has energy food in plenty, minerals for bone and muscle repair, vitamins as required to prevent the onslaught of many a disease which may take hold without this foresight. Always keep in mind "Food is cheaper than the doctor." Study the family diet.

♦

Honey, the most delectable of sweets, provides both energy and minerals. And the energy is in a most readily available form. An intake of honey furnishes a prompt return not possible with other sweets and also gives us some mineral supply so constantly needed by the body. So eat honey whenever a sweet is wanted. It provides a maximum of goodness at a minimum of price.

♦

How is your honey going to market? Is it all dressed up to attract the visitor's eye? Is it clean and shiny, in a nice shaped container with an attractive label? Is it right out in front on the shelf or counter or is it tucked back in the darkest corner "unseen and unsung." One of the big industries of this nation trains their salesman upon entering every store first to locate the proprietor. If he is busy, the salesman immediately steps to the section of the store where his products are on display. He dusts and shines up every bottle and jar. He cleans up the shelves. Then he rearranges his complete line bringing the old stock to the front and leaving the spaces behind for the order he hopes to get as soon as the proprietor is free to give it to him. Thus he helps the storekeeper and at the same time keeps his own product moving. Good idea don't you think?

Choose a container that does not tip over easily, one that can be used about the kitchen daily. Sometimes the container makes the first sale. Have a container that looks well on the display shelf. Choose a label that harmonizes in color with your honey. Choose one that harmonizes with the container in shape. Buying, like eating is affected by the eye, the touch, the smell and taste.

Put up placards suggesting uses for honey. Many people do not know how good honey is on cereals and fruit, and for drink it is the sweetening supreme.

♦

Have you noticed the tremendous publicity honey has received this year? Too bad we can't all read all the newspapers and magazines and hear all the radio programs!

General foods sent out a special release of honey recipes to 1000 food editors of newspapers and radio stations for National Honey Week. Papers and magazines all over the country used some of this excellent material.

Just this week the state department of agriculture of Massachusetts sent us their release on honey. They got out a delightful little booklet on honey which was distributed by their department. Massachusetts as you know is not one of the greatest producers of honey, but is interested in bees because of their pollen carrying value.

♦

Science has provided many short cuts for this ever speeding world, the airplane for travel, the radio for quick spread of news, the zipper for quick closures, the permanent wave for quick grooming, and now the capsule or concentrate for quick and convenient nourishment. The capsule has come to be used to provide a restoration of waning energies for the athlete, the soldier or whomsoever may be taxed beyond the endurance provided by the last meal. Why not have a capsule of honey? This would be a convenient way to dispense this product so packed with a quick energy supply.

♦

Bee, bee, buzzing bee,
The world without you
What would it be?

Ann M. Eggelson,
Home Economist.

♦

IMPROVEMENT

In the last few years, the greatest progress has been made in the education of beekeepers, the slowest progress in improved management.

Floyd Markham,
(Michigan Meeting.)

INSTITUTE BOARD MEETING

(Continued from page 545)

Secretary-Treasurer — Mrs. Harriet M. Grace, Madison, Wisconsin.

The following directors were elected:

For three years—L. C. Dadant, Hamilton Illinois. L. W. Parks, Watertown, Wisconsin.

For one year—R. E. Foster, Gainesville, Florida. R. F. Remer, Sioux City, Iowa. H. M. Krebs, Sacramento, California.

For two years—M. S. Stone, Ogden, Utah, V. G. Milum, Champaign, Illinois.

Honey Utilization Committee

Mr. G. P. Walton made a report of the honey utilization committee and their report was accepted and placed on file.

On motion a special publicity committee was named consisting of Lewis W. Parks, Chairman, W. H. Straub, John H. Paton, and T. W. Burleson.

Executive committee elected was Lewis W. Parks, Chairman, M. J. Deyell, R. F. Remer.

Mrs. Harriet M. Grace made a full report of the year's work and this will be given in detail in the annual report of the Institute. The financial report will also be given in the annual report. Mrs. Harriet M. Grace was again elected director of the Institute for the ensuing year.

♦

LIST OF CONTRIBUTORS TO THE $20,000.00 PUBLICITY FUND

The following list subscribed to the Institute fund at the Omaha meeting October 22, 23, and 24.

Amt. Subscribed — Name of Subscriber

$1,000.00—Central Ohio Apiaries, Inc., Millersport, Ohio.
3,000.00—Sioux Honey Association Co-Operative, Sioux City, Iowa.
2,000.00—The J. G. Paton Co., Inc., New York City.
1,500.00—T. W. Burleson and Son, Waxahachie, Texas.
2,000.00—W. F. Straub and Company, Chicago, Illinois.
1,500.00—G. B. Lewis Company, Watertown, Wisconsin.
1,000.00—Dadant & Sons, Hamilton, Illinois.
600.00—Superior Honey Company, Ogden, Utah.
200.00—Lewis M. White, Portland, Oregon.
200.00—N. E. Miller Honey Company, Provo, Utah.
1,750.00—The A. I. Root Company, Medina, Ohio.
250.00—The A. I. Root Company, Council Bluffs, Iowa.
100.00—Old Taylor Honey Company, Chandler, Oklahoma.
30.00—Louis Hines, Omaha, Nebraska.
10.00—Rev. Francis Jaeger, St. Bonifacious, Minnesota.
25.00—Carl E. Killion, Paris, Illinois.
20.00—J. G. Jessup, Council Bluffs, Iowa.
18.00—Carl L. Soder, Stratford, Iowa.
250.00—August Lotz Company, Boyd, Wisconsin.
5.00—James Gwin, Madison, Wisconsin.
18.00—V. Culhane, Falfa, Colorado.
100.00—E. W. Stewart, Fairfax, Missouri.
15.00—B. J. Ginsbach, Sioux Falls, South Dakota.
5.00—John Speelman, Manhattan, Montana.
15.00—W. O. Harris, Cozad, Nebraska.
20.00—R. H. Walstrom, Omaha, Nebraska.
100.00—Honey Acres, Menomonee Falls, Wisconsin.
100.00—A. I. Root Company, Chicago, Illinois.
50.00—Harry J. Rodenberg, Manhattan, Montana.
250.00—A. G. Woodman Company.
250.00—Oscar H. Schmidt.
25.00—Fred H. Peterson.
25.00—Weaver Apiaries, Navasota, Texas.
12.00—Thomas Burleson, Colusa, California.

To these firms and individuals goes the credit of making possible the proposed publicity campaign under the direction of Steve Hannagan Associates of New York. Others have since subscribed and more subscriptions will follow.

Will YOU help? See page 573 for pledge.

DO IT NOW!

♦

NATIONAL BEEKEEPERS AUXILIARY

The National Auxiliary held its annual convention October 22, 23, 24 at Omaha, Nebraska, as a part of the meeting of the National Beekeeping Conferences. The ladies were entertained on October 22 by the Nebraska Beekeepers Auxiliary with a tea given in the Y. W. C. A. Nine states were represented. On October 23 a program and business meeting occurred. The meeting was called to order by the president, Mrs. T. W. Burleson, Waxahachie, Texas. An address of welcome was given by Mrs. L. M. Gates, Lincoln, Nebraska, and the response was given by Mrs. Burleson. In the absence of Mrs. Benjamin Nielson, the secretary, Mrs. E. H. Bremer, read an interesting paper which had been prepared by Mrs. Nielson. This was followed by a talk by Mrs. Harriett M. Grace, director, American Honey Institute, on "New Trends in Nutrition." Mrs. Grace brought the ladies a sample of honey tissue cream and honey lotion made at the Institute. Mrs. F. B. Paddock, Ames, Iowa, gave a paper on "The Value of Women's Work in the Consumption of Honey," in which she gave a brief history of beekeeping, told of the work which the Iowa Auxiliary is doing, and introduced the members of her organization present.

At the business meeting which followed Mrs. T. W. Burleson, Waxahachie, Texas, was re-elected president; Mrs. E. H. Bremer, Route 1, Box 368, San Antonio, Texas, secretary-treasurer; Mrs. L. M. Gates, Lincoln, Nebraska; Mrs. Jos. Hermann, Manchester, Iowa; Mrs. R. E. Foster, Gainesville, Florida; Mrs. Eva Wixom, Wapato, Washington; Mrs. M. Stevenson, Westwego, La.; Mrs. Walter M. Copeland, Lexington, Mass., regional vice-presidents. It was voted to discontinue cash prizes for membership contests. The matter of the constitution was brought up and a committee was appointed to rewrite the constitution. October 24 a meeting was held at which time a new constitution was adopted. The changed from the National Auxiliary of the American Honey Indusrty to the National Beekeepers Auxiliary as the opinion of the ladies was that there was no such organization as the American Honey Industry and the National Auxiliary is made up of members of the State Beekeepers Auxiliaries. The object of the National Beekeepers Auxiliary is defined in the constitution as being the promotion and encouragement of beekeeping by placing special emphasis on the use of honey in the home. The National Auxiliary voted to send a membership fee of $10.00 for the American Honey Institute and to go on record as being in favor of the policies of the Institute.

Mrs. E. H. Bremer,
Route 1, Box 368,
San Antonio, Texas,
Secretary-Treasurer.

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AMERICAN HONEY INSTITUTE GENERAL MEETING

Wednesday, November 23, was devoted to American Honey Institute with an afternoon session of the Apiary Inspectors of America and a supplementary session of the National Auxiliary of the American Honey Industry, with Mrs. T. W. Burleson of Waxahachie, Texas presiding. A report of this is given elsewhere on this page.

The Honey Institute program embraced a thorough report of the work of the Institute by Mrs. Harriett M. Grace, the Institute director, Madison, Wisconsin. We hope later to have her full report.

Maurice Dadant "Honey Markets, Past, Present and Future" will appear in full in a later issue. The other talks on this program will be extended in more complete notes when room permits.

Mrs. Harriett M. Grace is now secretary-treasurer and manager of of American Honey Institute with Lewis W. Parks of Watertown as chairman, and A. G. Woodman of Grand Rapids, vice chairman.

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AMERICAN HONEY PRODUCERS' LEAGUE GENERAL MEETING

Tuesday, November 22, featured American Honey Producers' League with Thos. C. Burleson presiding.

L. C. Dadant "Advertising Honey"

will appear in full in a later issue. F. B. Paddock "Honey Producing Conditions in the Middle West" will also appear in full in a later issue.

Dr. George W. Aimlay of Fairbury, Nebraska, told of his use of bee venom in the treatment of arthritis and neuritis following the method of Dr. Beck to some extent, but using a different application of the venom itself. He reported considerable relief from distress on the part of many patients. Other talks in these sessions will be later reviewed in more extensive notes than is possible at this time.

New officers of the American Honey Producers' League are John Holzberlein of Denver, Colorado, president; Eugene B. Cutts, Montgomery, Alabama, vice president; Louis Hines, Omaha, Nebraska, secretary-treasurer.

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APIARY INSPECTORS

At the Apiary Inspectors meeting during the course of the National conventions at Omaha, discussion was had on the model bee law prepared by Jas. I. Hambleton at the instance of the Inspectors. Copies of such law are available from the Bee Culture Laboratory, and from the Secretary of the Inspector's association.

F. B. Paddock was re-elected as president of the association and Clay Lyle as secretary-treasurer.

LEAGUE LIFE MEMBER

Francis Jager

At Omaha, the American Honey Producers' League selected Father Francis Jager, of Minnesota, as an Honorary Life Member. It is a good choice. Perhaps no one has helped American beekeeping more than Father Jager; nor done it more uniquely.

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POOR HONEY

Poor honey is just as good as good honey poorly put up. We should grade by U. S. standards.

Howard Potter,
(Michigan Meeting.)

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SOUTHERN STATES BEEKEEPING FEDERATION

THE gavel of President Bessonet opened the 1940 conference of Southern States Beekeeping Federation at Tampa, Monday morning, November 18th, with the usual procedure that solidifies the attention of beekeepers and their visiting friends on the program to follow.

The President's address following the invocation and address of welcome was a confession of honest efforts to serve the conference and engineer legislative procedure designed to give Federal aid in improved queen breeding.

W. E. Anderson of Louisiana, one of the founders of the Southern Conference, told of their effort to eradicate the white fringe beetle in certain sections of Louisiana, through wholesale spraying of vegetation. This has destroyed hundreds of colonies of bees, says Mr. Anderson. Initial payments to beekeepers suffering from such losses will not be continued, warns Mr. Anderson.

Appointment of a five-man nominating committee ended the morning session. The committee: George W. Bohne, Louisiana; W. H. Williamson, Florida; C. H. Herndon, Georgia; J. D. Foster, South Carolina; H. W. Weatherford, Virginia.

A fine lunch served in the hotel, preceded the inspiring address of Guy LeStourgeon, outlining the accomplishments of the Southern Conference and naming future objectives.

Professor David Dunavan of Clemson College, South Carolina, divided his state into Mountain, Piedmont, Central, and Coastal producing regions. He named the important producing plants in each.

Dad Bohne suggests: Beekeepers should follow good beekeeping practices if they remain true to themselves and their neighbors. Think for yourself, says Dad Bohne, or your trust in those serving you may prove fateful.

Dr. Warren Whitcomb revealed many discoveries in Southern Laboratory Research. "Queens sometimes mate more than once," says Dr. Whitcomb.

E. R. Root, the Grand Old Man of Beekeeping, entertained with a diversified address, during which he eulogized the splendid work of C. L. Sams of North Carolina, and Ned Prevost of South Carolina. Packing bees for winter, says Mr. Root, has been overdone.

C. H. Bishop described the workings and results of the 1940 Georgia Honey Show, grandest in Georgia history.

Moving pictures of Beekeeping in Alabama and Georgia, followed by Tampa Highlights, entertained until the inspectors, package shippers and honey packers were able to assemble in separate halls.

President A. J. Reamy of the Georgia Beekeepers Association a most able chairman, brought silence to the packed assembly Tuesday morning, when he introduced G. G. Puett at nine A. M. Mr. Puett exposed the dangers of "confidence men" in the package business, and offered suggestions for avoiding these and other stumbling blocks.

The forceful and most welcome voice of Geo. Rea brought news from New York. Good farmer beekeepers are most important to general or diversified agriculture, says Mr. Rea.

Tom Burleson, the Texas Ace, says new blood must be encouraged. "My son," says Mr. Burleson, "is spending $10,000.00 annually advertising honey." This spending is proving profitable because new ideas and new methods were given freedom in the Burleson business.

R. W. Sterrett, representing Owens Illinois Glass Company, says the slogan "See what you buy—Buy in glass" has made America think, and "What America thinks makes a whale of a difference to your business."

Mr. Wentzel of the U. S. Postal Service named many of the errors affecting loss in shipping and transporting bees by parcel post.

L. M. Rhodes, Commissioner of Agriculture, Florida, delivered a most inspiring address Tuesday afternoon. Says Mr. Rhodes, jealousy among producers of any product is a tremendous hindrance to advancement of any industry; standardization of products, a great boon.

Mrs. R. E. Foster, President of the Ladies Auxiliary, presided at the afternoon session. "This is a delightful occasion, "said Mrs. Foster, "Just a great, great big family reunion." After calling for increasing activity among the ladies, Mrs. Foster introduced the most important queen of our industry, Mrs. Harriet M. Grace, of the American Honey

Institute. Mrs. Grace offered many revealing facts concerning the future of honey. For the first time in the history of the Institute, said Mrs. Grace, we have a substantial bank account on which to operate.

Interesting talks followed by Mrs. Tom Burleson of Texas, Mrs. H. S. Foster of Florida and Mrs. R. W. House of Florida.

"Carry Me Back to Old Virginia," sung by Mr. and Mrs. Gus Seeburg, furnished restful entertainment. Leslie Lewis, Florida, G. E. Seeburg, Florida, and J. J. Wilder, Georgia, spoke briefly, to make way for the Tampa Tour at four P. M.

That gorgeous occasion, "The Banquet," climaxed the reunion. Toastmaster S. W. Hiatt of Florida State Marketing Bureau called on many of the guests for a toast following a most unusual entertaining feature, of Spanish dancing. The graceful young dancers gave inspiration to members of that royal ignoble order of Flea Hoppers. The many candidates of this historic secret meeting will long remember the little yellow dog—that faithful mascot—of the benevolent order of Flea Hoppers.

Wednesday morning became a rushing session, with Leslie Lewis substituting for Lynn Dewey, as chairman of the Florida Beekeepers' Association. Brief addresses were given by Raymond Sheldon, Florida, A. J. Reamy, Georgia, P. G. Craddock, North Carolina, C. A. Reese, Ohio, and M. C. Berry, Alabama.

Report of the Nominating Committee gave Lynchburg, Virginia the Conference for 1941; elected A. V. Dowling, president, J. G. Rossman, vice-president, and H. W. Weatherford, secretary.

A substantial contribution was given the American Honey Institute by various state representatives and associations.

H. S. Foster, A. K. Dickinson, Mr. and Mrs. Bob Foster, and the many others responsible for the success of the long-to-be-remembered Tampa Conference, we salute you!

A. D. Hiett, Reporter.

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Manitoba Beekeeping Short Course

The annual Beekeeping Short Course given at the University of Manitoba, will be held from January 20th to January 31st, 1941. With stocks low, prices good and odds in favor of a good crop in Manitoba next summer indications are that there will be considerable interest in the course. A good attendance of Beekeepers who are anxious to "keep bees better" will ensure an interesting and profitable time in the lecture periods and discussions of beekeeping problems.

The course is presented chiefly by Professor A. V. Mitchener and E. C. Martin of the University, and Mr. L. T. Floyd, Provincial Apiarist. There are also especially valuable lectures from other people connected with the honey industry or the University staff.

Application for the course should be made to Dean A. V. Mitchener, Faculty of Agriculture and Home Economics, The University of Manitoba, Winnipeg, Canada. Full information on facilities for board and room, tuition fee and outline of short courses may be obtained by writing to Dean Mitchener.

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Beekeeping Section Annual Farm and Home Week Program University of Illinois January 6, to 10, 1941

Tuesday, January 7—101 Vivarium Building

9:00—The Yearly Cycle of the Bee Colony, V. G. Milum.

10:00—The Essentials of a Good Hive—the home of the colony, Carl E. Killion, Chief Inspector of Apiaries, Paris, Illinois.

11:00—The Adaptations of the Honeybee's Body and Their Use, V. G. Milum.

1:00— Illinois Honey Plants—Present and Future, G. H. Cale, Editor, American Bee Journal.

2:00—The Queen—Her Activities and Importance, Carl E. Killion.

Demonstrations in Handling Bees (Room 110 Vivarium), V. G. Milum.

Wednesday, January 8

9:00—Fall and Winter Management of Bees, V. G. Milum.

10:00—Spring Management and Swarm Control in Extracted Honey Production, G. H. Cale.

11:00—Production of Comb Honey, Carl E. Killion.

1:00—Care and Grading of Comb Honey for the Market, Carl E. Killion.

Market Forms and Grades of Extracted Honey Production, G. H. Cale.

2:00—Physical and Chemical Properties of Honey House Equipment (Room 110 Vivarium).

Thursday, January 9

8:00—Comb Pests and Adult Bee Diseases, V. G. Milum.

9:00—Characteristics of Brood Disease, Wayne Mussulman, Champaign.

Apiary Inspection and Disposal of Disease Colonies, Carl E. Killion.

10:00—Recent Development in Races and Strains of Bees, L. R. Stewart, Newport, Indiana.

11:00—Honey for Athletes and Others, Dr. Harold Osborn, Assistant Track Coach, University of Illinois.

The Work of the Illinois Honey Foundation, Mrs. A. G. Gill, Evanston.

1:00—How Not to Hive a Swarm of Bees, E. Wikowski, Cisco.

Beekeeping Cooperation in Illinois. Officers Illinois State Beekeepers Association: President — Adam Bodenschatz, Lemont, Secretary—Hoyt Taylor, Pleasant Plains; Treassurer—Wesley Osborne, Hillsboro.

2:00—What Is the Future of Beekeeping? G. H. Cale.

Lessons from the Past for the Present, A. G. Gill, A. I. Root Co., Co., Chicago.

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Annual Meeting Empire State Honey Producers' Association Friday and Saturday, December 6, and 7, 1940 Comstock Hall, Cornell University, Ithaca, New York

Friday Morning, December 6

Apiculture Class Room 17, Comstsock Hall, Ground Floor

8:30—Registration and Payment of Dues, Informal Discussion.

10:00—Business Session. Election of Officers.
11:15—The Producers Part in Marketing, H. H. Root, Medina, Ohio.

Friday Afternoon, December 6

Auditorium Room 245, Second Floor, Comstock Hall

1:00—Rearing Queen Bees in New York State, Millard Coggshell, Groton, New York.
1:30—Pasture Improvement and the Beekeeper. Illustrated. Professor D. R. Johnstone-Wallace, Ithaca, New York.
2:30—Woman's Place in Beekeeping, Mrs. Charlotte H. Merrell, Wolcott, New York.
2:45—For the Ladies: Tour of the College of Home Economics and Informal Tea conducted by Mrs. Mary G. Phillips, Ithaca, New York; Mrs. Charlotte H. Merrell, Wolcott, New York; and Miss Lucile Coggshall, Ithaca, New York.
2:45—Pollination of the Clovers. Illustrated. Doctor W. E. Dunham, Columbus, Ohio.
3:30—Producing Package Bees and Queens, Morley Pettit, Tifton, Georgia.
4:15—Results Obtained from Package Bees. Illustrated. Professor E. J. Anderson, State College, Pennsylvania.

Friday Evening, December 6

Bethel Grove Community Home, 4.5 miles from Comstock Hall on Highway 79 east of Ithaca. Leave Ithaca by East State Street.
6:00—Dinner. Speaker—Professor E. F. Phillips, Ithaca, New York. "Proper Stories of Bees and Beekeepers."

Saturday Morning, December 7

Auditorium Room 245, Second Floor, Comstock Hall.

8:30—Handling Extracted Honey Properly and Improperly, Doctor E. J. Dyce, Guelph, Ontario, Canada. Discussion.
9:45—Cooperative Sale of Honey. Morley Pettit, E. J. Dyce, W. L. Coggshall, Ithaca, New York.
10:45—Results in Apiary Inspection, A. C. Gould, Albany, New York.
11:25—New Pictures in Color. H. H. Root, Medina, Ohio.

Saturday Afternoon, December 7

Auditorium Room 245, Second Floor, Comstock Hall

1:00—Unrecorded Observations of Winter Bee Behavior, E. F. Phillips.
2:00—Records of Wintering Methods, W. E. Dunham.
3:00—Winter Losses of 1939-40, George H. Rea.

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Ohio Beekeepers' Short Course, January 28-30

The Ohio Beekeepers' Short Course is being scheduled on January 28, 29 and 30 of Farmers' Week at the Ohio State University. The subject material has been arranged under three distinct groupings as follows:

January 28—Problems of the small Beekeeper.

January 29—Production problems in commercial honey production.

January 30—Marketing problems of the industry.

Contacts are being made for three out-of-state speakers to participate in the educational sessions. All beekeepers are cordially invited to attend.

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Middlesex (Mass.) Dec. 12

The Middlesex County Beekeepers Association will meet at 19 Everett Street, Concord, Mass., on Saturday, December 28th, at 7 P. M. Mr. Fred Russell of Chelmsford will speak on improvement of nectar sources. Mrs. B. R. Hildreth will be in charge of the Ladies Auxiliary supper featuring meat loaf, scalloped potatoes, carrots and peas, celery, honey mince and honey apple pies, honey rolls and coffee.

A. M. Southwick, Pres.

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George C. Barton

George C. Barton, New Hampshire inspector of Apiaries, died September 21, at his home in Meriden, New Hampshire. He was over 80 years of age. Mr. Barton was one of the older beekeepers in the state. He was a graduate of Dartmouth College and for some time after graduating taught physics. However, his health failed and he went back to his boyhood home and engaged in agricultural pursuits. He was always interested in beekeeping and had a considerable sized apiary himself. Therefore, when the need for an inspection law came up in New Hampshire, he introduced the bill and fought it through the legislature. The Commissioner of Agriculture felt that he was probably the best qualified man in the state to carry out the provisions of the act and appointed him as the inspector, a position which he has held ever since. He was very conscientious in his inspection work and has practically wiped out American foulbrood in the state. The New Hampshire beekeepers will miss him.

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CHRIST WITH A HIVE AND BEES

(Continued from page 543)

The shepherd boy warns the Lord that the bear (devil) infests the fields and is very fond of honey (worldly pleasure). Christ has a difficult task to establish the apiary and keep away the bear from the hives. The lazy drone represents the body and the industrious worker bees the soul. In innumerable scenes the devil seduces the drone to indulge in honey. The picture on the front cover was undoubtedly inspired by this classic work.

It is not surprising that, according to Christian traditions, it was a sin to kill a bee. There was a universal belief that great punishment would be inflicted upon those who committed such a crime. The devil would surely get them. In Switzerland, children were told that their hair turns gray overnight if they hurt a bee. On certain holidays the hives were sprinkled with holy water. It was an old belief that the devil can conceal himself in all animals except bees, sheep and poultry. The Spanish mother's best wish to her son was, "Bees, sheep, millstones, a pen behind the ear and a place in the Church."

The frequent mention of bees, honey and wax in the Holy Scriptures is the best evidence how highly esteemed they were.

CROP AND MARKET REPORT

Compiled by M. G. DADANT

For our December Crop and Market Page we have asked reporters to answer the following questions:

1. At what price is honey selling in 5's, 60's, and comb honey per case?
2. Is the demand for honey brisk or poor?
3. Are larger buyers active in offers to buy?
4. What prices are offered for carlot white honey?
5. Do you anticipate a rising market?

Price on 5-pound, 60's, and Comb Honey

Retail price on five-pound pails of honey vary exceedingly, ranging as low as 29 cents, according to some California and Washington reports, and as high as $1.00 with one or two New England reporters, the average being about 50 cents retail.

We hear of numerous reports of honey selling at 35 cents per pail out of the stores, probably as a leader with average store sales ranging close to the 50 cent point as mentioned above.

Strangely enough, reports on five gallon cans of honey moving singly are that they go at nearly as good a price as do the five pound pails, the average being in the neighborhood of 6½ cents per pound. Evidently customer sales on five gallon cans of honey are not subject to the wide range and fluctuations as are the five-pound pails in the larger and chain store markets.

Comb honey prices, although not excessive, are ruling satisfactorily and the amount of comb honey seems to be very light this year, probably not any more than enough to supply the demand throughout the season.

Demand

Most reports are that the demand for honey is fair to brisk. Satisfactory demand is encountered chiefly in the southeastern states where it is reported that two-thirds of the crop has already moved and there is a brisk sale. Poorer sales and poorer demands are reported from the plains area and the intermountain territory with a heavy demand throughout the Canadian provinces where also we have a shortage of volume of production this year.

Are Large Buyers Active?

Southeast, of course, and most of the East present to us very few buyers. In the central area the buyers were active earlier but probably have enough to supply their demand over and through the Christmas period so that we need not look for any resumption until after that time. There has been considerable demand on the part of the Canadian buyers, particularly in the north central states which has made for rather brisk movement and quite a tendency toward an increase in prices.

Buyers are only moderately active in the plains area and particularly in the intermountain territory, with low prices still prevailing. On the Pacific coast buyers are inactive but likely most of the white honey has already been taken up owing to early buying before the crops for the West were prepared for market.

Carload Prices

The eastern states report prices now being paid ranging around 5½ cents to 6½ cents for good white honey delivered New York City, with several reports of 6 cents as about the standard price.

Very little honey is moving in carload lots out of the Southwest where apparently the local demand is taking up most of the honey with the necessity for importing honey from other sections in order to keep a constant supply in front of the consumers.

In the central western areas the prices ordinarily paid range from 4½ to 4¾ cents for good white honey f. o. b. producer's station, cans to be returned. In Michigan and Minnesota where the Canadian market is close, figures range from 5 cents to 5¼ cents for honey f. o. b. shipping station, in most instances cans not returned.

The intermountain territory and the western central sections have similar prices of 4½ to 4¾ cents f. o. b. shipping station, with much lower prices ranging in the intermountain area where 4 cents to 4½ cents is the usual price paid. We hear of some reports as low as 3 cents to 3½ cents in Idaho where cans have already been furnished to the producers and they are more or less duty bound to make sales to the previous buyers.

We learn of two or three shipments in Montana moving at 5¼ cents, f. o. b. station for water white and one car in Colorado selling at 5 cents. However, these are probably somewhat above the usual rule and there has perhaps been a tendency to sell at least as low as last year if not perhaps a little lower than a year ago, with the lowest prices ruling in the intermountain territory where there is little possibility of cans being returned to the producer.

California still reports low price honey, amber running as low as 3½ cents in California and Arizona, with some good white star thistle honey selling at 4¾ cents delivered to nearby larger cities.

In Canada prices naturally have ruled quite high, inasmuch as the Canadian buyers are able to pay as high as five cents or a little better f. o. b. U. S. shipping points.

Prices are ranging from 8½ cents as high as 10½ cents for good white honey. Unfortunately the Canadian crop was small this year or Canadian beekeepers would be in an enviable position.

Will Market Rise?

About half of our reporters are doubtful that there will be any advance in the market or at least a very light advance quite late in the season whereas most of the other reporters are of the opinion that there is to be decidedly an advance after the first of the year, gradually assuming satisfactory proportions by the time the winter and cool spring season is over. All reporters agree, however, that the advance will not be excessive although a continuous rise in employment and wage scale may mean increased demand which in turn will make a shortage of honey.

We do see a tendency on the part of many producers to hold their crop for a better price than they are now offered with little desire to sell, at least for the present at the prices that are being offered. On the other hand, buyers are satisfied to quote on the old basis which has been offered during the fall or allow their stock to deplete before they rebuy at an increase in price which would range from ¼ to ½ cent per pound.

We see no reason to change our previous price suggestions in the Crop and Market Page of the November issue.

Summary

All in all, the crop this year has been somewhat in excess of what it was in 1939, but the total honey on hand much below what it was on December 1 of last year, owing to the 1938 carryover. We can also safely say that the crop of good white honey is proportionally smaller than that of other grades due to the shortage in crop in the northern plain area and in many parts of the central states. More and more bakers are demanding good, white, mild flavored honey so it looks like the people who still have their white honey on hand should be able to command somewhat more satisfactory prices before March or April.

THE MARKET PLACE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

BEES AND QUEENS

Golden Queens, excellent quality. Hardy gentle, productive. Health certificate, satisfaction guaranteed. Untested 50c; tested $1.00. O. E. Brown, Route 1, Asheboro, North Carolina.

WRITE FOR PRICES on Bees and Queens for 1941. Graydon Bros., Rt. 2, Greenville, Alabama.

GOOD PACKAGE BEES and QUEENS for 1941. We have supplied leading beekeepers for many years and of late years have not found it necessary to advertise a whole lot even though we have one of the largest, best equipped queen and package establishments in the South. If you want the utmost satisfaction from your packages and queens write me. Three banded Italians only. No disease. H. C. Short, Fitzpatrick, Alabama.

HONEY FOR SALE

HONEY FOR SALE—We buy and sell all kinds, carloads and less. The John G. Paton Company, Inc. 630 Fifth Avenue, New York, N. Y.

FINEST WHITE CLOVER extracted. Liberal discount, by truck at our place. N. B. Querin, Bellevue, Ohio.

FINE QUALITY clover and light amber honey. Alfred Stutt, Creston, Iowa, Rt. 3.

WHITE CLOVER COMB $3 case; amber $2.50. Clover extracted 7c; amber 6c; buckwheat 6c. C. B. Howard, Geneva, N. Y.

FINE CLOVER HONEY extracted, in 60 pound cans. Satisfy yourself with a sample for the asking. W. S. Earls, New Canton, Illinois.

CHOICE EXTRACTED CLOVER HONEY in 60's. R. C. Bish, Successor to Moore Apiaries, Tiffin, Ohio.

FANCY TUPELO HONEY for sale, barrels and 60's. Marks Tupelo Honey Co., Apalachicola, Florida.

PURE RASPBERRY HONEY. Write for prices. Frank Reith, Boyd, Wisconsin.

MICHIGAN'S FINEST CLOVER HONEY. Clean, well ripened. New sixties, 5½c. Amber 5c. You will be pleased. John McColl, Tecumseh, Michigan.

WHITE CLOVER in 60's 6c. Light amber 5c. Dark amber about half buckwheat 5c. F. J. Smith, Castalia, Ohio.

GOOD EXTRACTED CLOVER in 60's 6c. Amber 5½c. H. G. Quirin, Bellevue, Ohio.

140 CANS of amber and white extracted. 5c per lb. f. o. b. Putman, Illinois. Walter I. Wright.

FOR SALE—Fancy, well ripened, white sweet clover honey in 60-lb. cans by the case or carload. Extra good quality. Dadant & Sons, Hamilton, Ill.

FOR SALE—Fancy Iowa white clover extracted honey. Kalona Honey Co., Kalona, Iowa.

CHOICE Michigan Clover Honey. New 60's. David Running, Filion, Michigan.

COMPLETE LINE comb and bottled honey. Pure clover. Also packed in 5's and 60's. Central Ohio Apiaries, Inc., Millersport, Ohio.

ORANGE, Palmetto and Mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

HONEY PACKERS—Write us for prices on carload lots of California and Western Honey. We stock all varieties. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, California.

FOR SALE—Northern white extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

FOR SALE—Honey by the carload. Imperial Valley Beekeepers Association, 47 Heber Avenue, Calexico, California.

HONEY FOR SALE—All kinds, any quantity. H. & S. Honey and Wax Company, Inc., 265-267 Greenwich Street, New York.

WE BUY AND SELL ALL KINDS COMB AND EXTRACTED CARLOADS AND LESS. H. BLITZ, P. O. BOX 3452, PHILADELPHIA, PA.

HONEY FOR SALE — Any quantity, all varieties. B-Z-B Honey Company, Alhambra, California.

HONEY AND BEESWAX WANTED

ALL GRADES extracted honey wanted. Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th Street, Detroit, Michigan.

WANTED—Extracted honey both white and light amber. Give amount, also price wanted in first letter. ILLINOIS HONEY PRODUCERS ASSOCIATION, INC., Mt. Sterling, Illinois.

CARLOADS and truck loads for our Oklahoma plant. Could use a truck load of shallow frame comb honey. Old Taylor Honey Co., Harlan, Iowa.

CASH FOR YOUR WAX the day received. Write for quotations and shipping tags. Walter Kelley Co., Paducah, Kentucky.

WANTED—HONEY. Car or truck lots. Mail samples. CLOVER BLOOM HONEY CO., Oklahoma City, Okla. Ref. Liberty National Bank.

WANTED—Large quantities of chunk comb in shallow frames; also section honey. Central Ohio Apiaries, Inc., Millersport, Ohio.

WANTED—Carlots honey; also beeswax, any quantity. Mail samples, state quantity and price. Bryant & Cookinham, Inc., Los Angeles, California.

FOR SALE

FOR SALE—We are constantly accumulating bee supplies slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it. Dadant & Sons, Hamilton, Illinois.

FOR SALE—500 stands bees, in two-story hives with supers and modern extracting equipment. Excellent locations in mountain valley southwest Colorado. Will also sell or lease honey house and small dwelling in town. Good opportunity for ambitious young beekeeper to expand. Write for particulars. Gale H. Patterson, Telluride, Colo.

250 COLONIES of bees, 8 frame hives. Disease free. L. E. Waller, Ben Franklin, Texas.

SUPPLIES

BEE SUPPLIES—New low prices. Best quality. Hives, frames, supers. New stock. Prompt shipments. Price list free. Northern Bee Supply Co., Osceola, Wisconsin.

THE ONLY COMPLETE LINE of wax rendering equipment ever offered—the "Perfection" line. A size and type suitable for every commercial beekeeper. Write for descriptive circular. Robinson's Wax Works, Mayville, N. Y.

COMB FOUNDATION at money-saving prices. Plain, wired, and thin section. Wax worked at lowest rate. Combs and cappings rendered. Robinson's Wax Works, Mayville, N. Y.

YOUR WAX WORKED into medium brood foundation, 15c pound; 100 pounds $10.00. Fred Peterson, Alden, Iowa.

CUT COMB HONEY cartons and equipment. Get our prices on everything for cut comb honey. James Hilbert, Traverse City, Mich.

WRITE FOR CATALOGUE. Quality bee supplies at factory store prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Onsted, Michigan.

DIFFERENT, that's all. Written and published for the instruction of beekeepers. 52 pages of breezy entertaining beekeeping comment each month. One year, $1.00; two years, $1.50. Sample, 3c stamp.
Beekeepers Item, San Antonio, Texas.

LARGE CASH SAVINGS can be made by letting us work your wax into either wired or plain foundation. -Large independent factory manufacturing a complete line of bee supplies including extractors, etc. Selling direct saves you the agent's profit. Quick shipment from large stock. Large free catalogue explains everything. Walter T. Kelley Co., Paducah, Kentucky.

DAIRY GOATS

DAIRY GOAT JOURNAL, Dept. 401, Fairbury, Nebraska, (big monthly magazine, 3 years $1.00) gives complete information. Introductory 5 months 10c.

WANTED

WANTED—Work as helper in southern apiary. Four years' experience. Andy Beeman, Grapevine, Arkansas.

EXPERIENCED queen breeder and honey producer wants a good position. Have small family. C. B. Saunders, Potosi, Missouri.

WANTED—Experienced queen breeder for coming season. Queen yards located in South Alabama. N. Forehand, DeLand, Fla.

WANTED—Disease free bees in ten frame hives located in Louisiana or Mississippi. Parent Apiaries, East Grand Forks, Minn.

WANTED—Several colonies bees. Also some equipment. Cash. State details. John O'Connell, General Delivery, Elgin, Illinois.

SEEDS

SEEDS of Anise-Hyssop, figwort, wingstem, catnip, golden cleome and other honey plants, fifteen cents per packet or eight for one dollar postpaid. Melvin Pellett, Atlantic, Iowa.

SAINFOIN, best hay and honey plant of much of Europe. Because of war conditions, seed is scarce and hard to secure. We supply a limited amount at one dollar per pound, postpaid. American Bee Journal, Hamilton, Illinois.

MISCELLANEOUS

MICHIGAN BEEKEEPER—The State Bee Magazine with a National Circulation. 50c a year. MICHIGAN BEEKEEPER, Rt. 3, Lansing, Mich.

IN THE MID-WEST it's Inland Poultry Journal, one year 25 cents, three years 50 cents. Printcraft Bldg., Indianapolis, Indiana.

OLD BEE BOOKS

A year ago the American Bee Journal offered some copies of old bee books which we had accumulated through combining of the late C. P. Dadant Bee Library together with that at the American Bee Journal office.

The demand was so great that our Mr. M. G. Dadant has since made an endeavor to collect from old book stores and other sources all of the old bee books which he could find at reasonable prices. We offer these as follows: "First come, first served." All prices postpaid.

Send All Orders to American Bee Journal, Hamilton, Ill.

Bevan, E.	"The Honeybee" 8vo cloth, 420 pg. 1838	$2.00
Cheshire, F. R.	"Practical Beekeeping" 8vo cloth, 115 pg. no date	1.50
Cheshire, F. R.	"Bees and Beekeeping—Vol. 1, 8vo cloth, 330 pg. 1886	3.00
Comstock, A. B.	"How to Keep Bees" 8vo cloth, 225 pg. 1905	1.00
Comstock, A. B.	Same 1915, 1918, 1920 editions, each	1.00
Cook, A. J.	"Beekeepers Guide" 8vo cloth, 300 pg. 1884	1.50
Cook, A. J.	Same 1899, 1888, 1894, editions, each	1.50
Cotton, W. C.	"My Bee Book" 8vo cloth, 355 pg. 1842	2.00
Dadant, C. P.	"First Lessons in Beekeeping" 8vo cloth, 190 pg. 1917	.50
Dadant, C. P.	Same, 1931	.50
Dadant, C. P.	"Dadant System of Beekeeping" 8vo cloth, 120 pg. 1920	.50
Dadant, C. P.	Same, Italian, French, each	.50
Dadant, M. G.	"Outapiaries" 8vo cloth, 1919	.50
Digges, J. G.	"Practical Bee Guide" 8vo paper, 225 pg. 1910	1.00
Doolittle, G. M.	"A Year's Work in an Outapiary" 6mo paper, 60 pg. 1903.	.75
Doolittle, G. M.	"Scientific Queenrearing" 8vo paper, 110 pg. 1915.	.25
Hawkins, K.	"Beekeeping in the South" 8 vo cloth, 115 pg. 1920	.40
Huber, F.	"Natural History of the Honeybee" 1926, 8vo cloth	1.50
Hunter, J.	"Manual of Beekeeping" 1875, 8mo cloth, 230 pg.	1.00
Hutchison, W. Z.	"Advanced Bee Culture" 1905, 6mo cloth, 320 pg.	2.00
Hutchison, W. Z.	Same, 1911	2.00
	Illinois State Beekeepers Report, 1905, 1908, 1909, 1910, 1911, 1912, 1918, 1932, 1929, 1937, 1938, cloth, 200 pg., each	.25
Jenyns, F. J.	"Book About Bees" 8vo cloth, 1886, 200 pg.	1.50
King, N. A. & H. A.	"Beekeepers Text Book" 12mo cloth, 140 pg. 1867	1.00
King, N. A. & H. A.	Same, paper, 1872	.50
King, N. A. & H. A.	Same, cloth, 1870, 1878, 1879, each	1.00
Langstroth, L. L.	"Hive and Honeybee" 8vo cloth 400 pg. loosebacks 1857	1.00
Langstroth, L. L.	Same, 1859, 1860, 1862, 1863, 1865, 1866, 1889, 1900, 1902, 1907, 1913, 1917, 1919, 1927, each	1.00
Langstroth, L. L.	Same, French, Italian	1.00
Langstroth, L. L.	Same, Italian, paper	.50
Lockhart, J. G.	"Bee Hnting" 12 mo paper, 70 pg. 1908	.50
Lubbock, Sir J.	"Ants, Bees, and Wasps" 8vo cloth, 450 pg. 1903	1.00
Lyon, D. E.	"How to Keep Bees for Profit" 1910, 8vo cloth, 310 pg.	1.00
Maeterlinck, M.	"Life of the Bee" 8vo cloth, 400 pg. 1901	1.00
Maeterlinck, M.	Same, 1902, 1903, 1906, 1922, each	1.00
Miller, C. C.	"Fifty Years Among the Bees" 8vo cloth, 320 pg. 1915	1.00
Neighbor, Alfred	"The Apiary" 8v cloth, 270 pg. 1866	1.50
Neighbor, Alfred	Same, 1878	1.50
Newman, T. G.	"Bees and Honey" 8vo cloth, 170 pg. 1890	1.00
Nutt, Thomas	"Management of Bees" 1848	2.00
Pellett, F. C.	"American Honey Plants" 6mo cloth	1.50
Pellett, F. C.	"History of American Beekeeping" 6mo cloth, 250 pg. 1938	1.75
Pellett, F. C.	"Practical Queen-Rearing" 1918, 8vo cloth, 110 pg.	.50
Pellett, F. C.	"Productive Beekeeping" 8vo cloth, 300 pg. 1928	1.50
Phillips, E. F.	"Beekeeping" 8vo cloth, 450 pg. 1915	1.50
Phillips, E. F.	Same, 1916, 1917, each	1.50
Quinby, M.	"Mysteries of Beekeeping Explained" 8 vo cloth, 350 pg. 1858	1.50
Quinby, M.	Same, 1865	1.50
Quinby, M.	Same—Reprint of Original Edition	1.50
Rayment, T.	"Money in Bees in Australia 1915" 8vo cloth, 275 pg.	1.00
Root, L. C.	"Quinby's New Beekeeping" 8vo cloth, 270 pg. 1883	1.00
Root, L. C.	Same, 1883 1884, 1897, 1908, 1909, 1913, 1916, 1918, ea.	1.00
Root, A. I. & E. R.	"ABC & XYZ of Beekeeping" 8mo cloth, 425 pg., 1890 1895, 1903, 1908, 1910, 1917, each	1.25
Simmins, S. A.	"A Modern Bee Farm" 1904, 8vo cloth, 400 pg.	1.50
Wilder, J. J.	"System of Bee Culture" 6mo paper, 100 pg. 1927	.50
Watson, L. R.	"Controlled Mating of Queen Bees" 6mo paper, 50 pg. 1927	.50

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THE POSTSCRIPT

In the various discussions concerning the first bees on the west coast, the part of Ezra Meeker seems to have been overlooked. It appears that the first bees in what is now the state of Washington were sent to Meeker by William Buck in March, 1856. At that time Meeker was at Steilacoom when four colonies brought from the East by Buck reached him. Meeker and Buck had crossed the plains together in 1852. At Bear River they parted, Buck going southward to California and Meeker northward to Puget Sound. Meeker sold two colonies at $125. each and sent the others to his claim where by the third year they had increased to twenty colonies. Ezra Meeker was thus the first beekeeper in the state of Washington.

♦

We are frequently surprised at reports of surplus honey from plants not generally recognized as important to the bees. Such a report comes from W. E. Bumgarner, of Marshfield, Missouri, who tells of having filled his hives for winter and in addition secured 20 to 40 pounds of surplus per colony from stone mint. Stone mint, **(Cunila origanoides)** sometimes called Maryland dittany grows on dry hills from New York to southern Missouri. If it yields so much honey in Missouri it must yield elsewhere as well, even though it be overlooked by the beekeepers.

Although a native plant it is sometimes planted in gardens for its cluster of small flowers which come in September and October.

♦

More reports of success with yellow spider flower or golden Cleome, **(Cleome lutea)** continue to come in. Mrs. R. E. Fox, of Chapin, Illinois, planted hers about three feet apart and says that they grew to a height of seven or eight feet and were covered with yellow flowers which attracted the bees all summer until frost.

Visitors to our test garden almost without exception have shown much interest in this plant when in bloom and expressed a desire to try it.

♦

J. H. Sturdevant, of St. Paul, Nebraska, inquires whether anyone has attempted to artificially heat the brood nest for spring brood rearing. We know of no such effort although it has been mentioned as a possibility on numerous occasions. A small electric heating unit could easily be supplied to warm the hive but whether it would pay remains to be determined.

♦

Inquiries come regarding the honey locust tree mentioned on this page in connection with the experiments of Dr. Russell Smith. Since both the black locust, **(Robinia pseudo-accacia)** and the honey locust **(Gleditsia triacanthos)** yield freely, there is much confusion regarding them. The black locust is much more widely planted and has been generally used by the CCC workers in preventing soil erosion. The honey locust often has thorns as much as a foot in length covering the trunk while the thorns of the black locust are very short. Both trees are of interest to the beekeeper.

♦

Inquiries continue to come for seed of sainfoin. The firm mentioned in our story of the plant, discontinued because the war made importing from Europe impossible. At last we have found another source of supply for those who want seed. Since the seed is scarce the price is high, one dollar per pound, postpaid. See classified ad in this issue.

♦

About 1905 a bill was introduced in the legislature of the state of Nevada to prohibit the keeping of bees in the vicinity of alfalfa fields. Another was introduced in Colorado legislature at about the same time to declare sweet clover a noxious weed and to require its eradication. Much effort has been necessary to prevent such foolish legislation in the past.

From Jay Smith comes an interesting story of an attempt to mate queens on an island off the Florida coast. In order to determine whether there were drones within flying range young queens but no drones were taken there. No bees were kept on the island which is two miles off shore. Whether drones from the mainland visited the island or whether the young queens flew across the channel, four of the six young queens were mated and returned to their hives safely. Now he proposes to try again on another island six miles out. There has long been discussion of the distance necessary to secure an isolated mating station but nobody seems to know for sure.

♦

Letters from Florida always have a special interest at this season when winter is just around the corner. One feels a bit of envy of the friends who are just now planting gardens, and wonders at the cajeput tree which blooms five times during the year thus offering five different honeyflows of about ten days each. At this distance one is inclined to overlook the mosquitoes and other disagreeable things which must be endured along with the pleasant ones. To be able to gather fruits and flowers in January instead of snowballs really does sound enticing.

♦

Glenn O. Jones calls attention to the fact that the famous old German beemaster Dzierzon, at one stage of his career, lost all but ten of his 400 colonies of bees from what appears to have been American foulbrood and built them up again from these disease resistant stocks. With so many cases of survival of disease by resistant colonies as have been brought to public attention it seems strange that the importance of selection and breeding from such stock as a means of prevention was not sooner recognized.

♦

Rev. L. L. Langstroth, inventor of the bee space and movable frame hive, was the first to advertise queen bees for sale in this country. When his first modest advertising appeared in this Journal in 1866 there was little prospect that queen-rearing would one day reach the proportions of the commercial enterprise that it has since become.

♦

In 1867 K. P. Kidder, of Vermont, began advertising Italians. At that time Kidder was well known as the author of a bee book, "Kidder's Guide to Apiarian Science." On its cover appeared a picture of the author with a beard formed of live bees, a method of attracting attention not unknown to the present day. One edition of the book appeared as early as 1848, many years before the methods of commercial queen-rearing were developed.

♦

H. Wedgeworth, of Florence, Arizona, continues his effort to provide bee pasture by planting trees. He says he wants enough to prove their worth, not just to play with. He planted 450 tamarix in rows and 1000 along the creek beds. He plans to use Vitex in similar manner. Well grown trees offer so much for the bees that one who has the necessary land can insure his bee pasture for a long time to come.

♦

The Iowa Beekeepers Association distributed 1,000 queens of disease resistant stock this season. Reports so far received indicate that most of those who tried these bees are well pleased with results. One large scale honey producer says that he will insist on resistant stock in the future since it simplifies his disease problem. Another reports that whereas formerly disease cost him several hundred dollars annually he no longer has a disease problem.

FRANK C. PELLETT.

Twenty Thousand Dollars to Make America Honey Conscious

- Twenty thousand dollars will work for us, day by day, through the entire year of 1941, creating demand for honey, making sales easier for us all. This issue gives the story. See what is being done. *Read pages 544-551.*
- Do you want the other fellow to carry your share of the load and do your job for you? Every fair minded beekeeper will take his coat off and co-operate to help raise this fund.
- Do your share. Every dollar you invest will bring ten dollars and more in publicity for honey and will mean readier sales and increased honey prices.

PLEDGE YOUR CONTRIBUTION NOW!

I believe in American Honey Institute. Thus I pledge to send annually a membership of $ ..... (based on $1 per ton of honey produced.)

Name .....

Address .....

Suggested basis for contributions—$1.00 per ton of honey produced or sold. ½ of 1% of sales of bee supplies, or of bees and queens.

Volume LXXX

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♦

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